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ABSTRACT

A study examined the following four alternatives to traditional vocational-technical high schools for delivering vocational education: apprenticeship programs, Comprehensive Employment and Training Act (CETA) programs, cooperative education, and industrial training. Two survey instruments were created specifically for the study: (1) a worker survey form, designed to assess demographic and personality characteristics of the worker and his or her satisfaction with training received from the alternative vocational education delivery system, and (2) a supervisor rating form, which assessed knowledge of job skill, quickness in learing a new job skill, work attitudes, dependability, and ability to get along with others. A total of 155 trainee/worker forms and 199 supervisor rating forms were completed. Participants' ratings of satisfaction with their program and employers' ratings of job performance indicate that on the whole the alternative delivery systems are meeting the needs of participants. Statistical analyses were performed to determine whether participants in the four programs differ in terms of demographic and personality characteristics and job performance ratings of worker satisfaction. Differences were found to exist, and their significance is discussed. (A related study of the relationship between proposed vocational program quality indicators, student satisfaction, placement, and job performance ratings is available separately through ERIC--see note.) (MN)

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A Comparison of Four Alternative Delivery Systems for Vocational Education: Apprenticeship, CETA, Cooperative Education, and Industrial Training

FINAL REPORT

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John A. Johnson, Ph. D.,
Principal Investigator

July, 1981

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Background to the Present Studies

For the past several years, the Maryland State Department of Education's Vocational-Technical Division has been developing, with the help of the Educational Testing Service, a program evaluation questionnaire. The questionnaire is completed by local personnel, students, and members of a visiting team. The items on the questionnaire inquire about teacher certification and experience, instructional objectives, performance standards, community relations, counseling services, and other program characteristics. A copy of this questionnaire can be found in Appendix A.

Because the questionnaire was designed to comprehensively cover all important program characteristics, it is quite lengthy. It is 12 pages long and contains over 300 individual items. A prior study by the present principal investigator (Johnson, 1980) was conducted to help reduce the number of program characteristics down to a central, essential set of categories. This was accomplished by mailing a letter to 50 State Directors of Vocational Education and to vocational education administrators in the District of Columbia and five U.S. territories, asking them for a list of what they considered to be essential indicators of program quality.

Examination of the returns showed 12 common themes or categories of program quality. Briefly, these were: (1) active advisory council and craft committees; (2) effective administration of program policies; (3) written plan for public relations; (4) certified, qualified staff; (5) adequate facilities and equipment; (6) recruitment program with equal access; (7) guidance and counseling services; (8) realistic, competency-based curricula; (9) cooperative education and supervised

work experience; (10) student organizations; (11) placement and follow-up services; and (12) program evaluation.

The first study in this final report describes how the quality indicator research project was used to organize and analyze data already collected with the ETS program evaluation questionnaire. Questionnaire data were available for over 11,000 students and over 600 teachers from Maryland vocational programs at the secondary level.[1] The second study compares four alternative delivery systems for vocational education--apprenticeship, CETA, cooperative education, and industrial training--and examines the relevance of the 12 dimensions of program quality for these systems.

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[1]Thanks go to Leo Lezzer for providing this archival data.

Study II: A Comparison of Four Alternative Delivery Systems for Vocational Education: Apprenticeship, CETA, Cooperative Education, and Industrial Training

Introduction

The purpose of the study described in this section of the report is to compare four alternatives to traditional vocational-technical high schools for delivering vocational education. These delivery systems include apprenticeship programs, CETA programs, cooperative education, and industrial training.

The following section of this part of the report describes the unique philosophies, methods, and general features of each delivery system. These program descriptions provide information that can be compared to the 12 categories of quality indicators for vocational education, described in an earlier report (Johnson, 1980) and in the report immediately preceding this one. Possible links between the quality indicator study and the present study are discussed in the implications section of this report. The actual relevance and importance of the 12 quality indicators for these alternative delivery systems was to be investigated through a survey of administrators and program directors. Time and fiscal constraints required that that issue be addressed by future research. The present study limits itself to a comparative description of the delivery systems and to an empirical investigation described below.

After the program characteristics of each delivery system are described, the report then describes a study to assess the impact of the four delivery systems on the satisfaction of the program graduates and on employer ratings of graduates' job performance. The moderating effects of demographic variables (age, sex, race, socioeconomic status, etc.) and personality variables (interests, vocational maturity, etc.) were also examined. Representative samples from each delivery system were identified, and program graduates and

employers surveyed. The implications of the results of the study for policy and future research are discussed.

Program Descriptions

The program descriptions below were provided largely by Maryland State Department of Education program coordinators and other directors and administrators.[3] Most of the following materials is taken verbatim from descriptions provided by these individuals. In cases where the material comes from a published source, the reference is noted. Otherwise, the information was provided--either orally or in writing--by one of the individuals cited in the footnote below.

A. Apprenticeship

> Apprenticeship is a process through which individuals learn to be skilled craft workers. Apprenticeship is paid employment which combines on-the-job training supervised by skilled journey workers with theory taught through job-related courses, such as drafting, blue-print reading, mathematics, and science. This instruction is usually given at vocational and trade schools, junior and community colleges, industrial training facilities, or through correspondence courses.
>
> The apprenticeship program is designed to teach the apprentice all the aspects of the trade, ensuring highly skilled workers for employers and unions, and increasing the individual's employability by providing a broad range of training. Those who have learned their trade through apprenticeship, being knowledgable and expert in the total range of tasks which make up the job, have greater job retention and are more likely to advance to supervisory and management positions.
>
> The length of a full apprenticeship program varies from 1 to 5 years, depending on the trade or occupation, with the majority of programs lasting from 3 to 4 years. Apprenticeship wages usually start at 50 percent of the journey worker wage, with increases about every six months if progress is satisfactory. An apprentice near the end of the training period is performing the work of a journey worker and is receiving about 95 percent of the journey worker wage.

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[3]Thanks go to Dick Kiley, Joe Olenski, Lou Nemerofsky, Gordon Byrd, Nathan Breed, Dave Webster, Georgia Duffee, and Nancy Pinson for providing or directing the principal investigator to this material.

Apprenticeship programs are operated by employers working with unions when the workers are organized, or by employers alone when there is no union. Training of apprentices is always a joint effort requiring close cooperation of skilled journey workers who do the actual on-the-job training and management which is responsible for the efficient operation of the program.

There are four types of programs in operation. Individual nonjoint programs in small shops without a union constitute the majority of all registered apprenticeship programs. An individual joint program is an individual employer with a union such as may occur in a manufacturing or other firm. Group joint involves two or more employers with a union, as in the construction and general contracting trades, and a group nonjoint program is a group of employers without a union, such as the Dental Technicians Association or the Auto Dealers Association among others have.

In the service, manufacturing, transportation, and printing industries, there may be one or more management-union / employee committees operating in each company or plant. The committee(s) operates the apprenticeship program, determines the number of apprentices, recruits applicants, administers tests, and accepts apprentices into the program.

In the construction industry, each trade has its own separate joint apprenticeship committee (JAC) which consists of representatives from the union and employers who hire workers in that trade. The joint apprenticeship committee interviews, tests, and accepts applicants for apprenticeship openings in the trade. Accepted applicants are placed on the JAC's waiting or hiring list in the order of their merit based on their qualifications and test scores, and employers select new apprentices from the list. The JAC's also supervise and evaluate apprentices' work experience, and certify them as journey workers when the training is successfully completed.

Apprenticeship involves the cooperation of employers, unions, vocational education and other schools and government. The Bureau of Apprenticeship and Training (BAT) is an agency of the Employment and Training Administration, U.S. Department of Labor. With 10 regional offices and field representatives in every state, BAT carries out the provisions of the National Apprenticeship Act which was passed in 1937 to promote the furtherance of labor standards of apprenticeship. State Apprenticeship Agencies recognized by the U.S. Department of Labor have been established in 29 states, the District of Columbia, the Virgin Islands, and Puerto Rico. Each of these State agencies obtains policy guidance from apprenticeship councils composed of employer, labor, and public representatives. Their work is carried on as an

integral part of the national apprenticeship system in cooperation with the Bureau of Apprenticeship and Training.

Appenticeship programs which meet the standards of the Department of Labor may be registered with the recognized State Apprenticeship Agency or the Federal Bureau of Apprenticeship and Training. These apprenticeship standards specified in 29 CFR 29 include items such as the ratio of apprentices to journey workers, the length of the apprenticeship training, the outline of the work process in which the apprentice will be trained, the wage scale progression, the credit which the apprentice receives for participating in the program, and equality of access to and opportunity in the apprenticeship program for all groups, including minorities and women. In addition to registering apprenticeship programs, BAT or a recognized State Apprenticeship Agency encourages private enterprise to establish systematic training in skilled occupations, and provide advisory services in developing, installing, and administering apprenticeship and allied training programs.

In summary, BAT works primarily in the private sector to develop employment opportunities and training for individuals. The skills developed and techniques used in promoting apprenticeship will be useful to CETA prime sponsers in developing other types of training in private business.

All of the above material was taken directly from the Apprenticeship and CETA Technical Assistance Guide, U.S. Department of Labor, 1979. The following section describes apprenticeship programs in Maryland. This material is from DVTE's "Apprenticeship Related Instructional Program."

Maryland has long recognized planned apprenticeship programs as one of the most important methods of producing and maintaining a competent and stable labor force particularly in the skilled trades and crafts.

Such programs, sponsered by employers, employer associations, or joint labor-management committees, consist of both on-the-job training and related or classroom and laboratory experiences. The Maryland Apprenticeship and Training Council is responsible for establishing standards and/or approving and registering programs that meet such standards.

One of the basic standards of the national apprenticeship program requires the provision for organized related and supplemental instruction necessary to provide apprentices with knowledge in technical subjects related to the trade. Under

#09.12.22 Rules, Regulations, and Standards Relating to Maryland Apprenticeship and Training Law, a "minimum of 144 hours for each year of apprenticeship or the number of hours necessary to cover related courses required by the program sponsor is recommended." Program sponsors, under the above Rules and Regulations, are encouraged "to use existing local public vocational school facilities in formulating and establishing courses of related instruction."

The Division of Vocational-Technical Education administers, through local school systems and the community colleges, the related technical instruction programs.

The State shares in the cost of training by providing a portion of the instructional salaries, which most frequently are supplemented by the program sponsors. The State's proportion of the total direct instructional costs continues to dwindle due to the increasing costs resulting from inflation in salaries and difficulty in recruiting technically qualified instructors. Other costs, such as textbooks, supplies, administration, and on-the-job placement and supervision are borne by the program sponsors, and these costs usually far exceed the direct instructional costs. Additional costs include the provision of related technical instruction for apprentices in less than class size groups and those who are too "isolated" to attend a class.

B. CETA.

A purpose of CETA is to provide training and employment opportunities to unemployed or underemployed persons who are economically disadvataged and to increase the earned income of these individuals and enhance their self-sufficiency. To do this, prime sponsors are to coordinate their CETA programs with related economic and community development activities and self-employment training programs.

The reenactment of CETA in October 1978, amended the original legislation to provide a balanced economic tool to counter both structural and cyclical unemployment, but clearly the program is aimed at training and employing those persons who are jobless for lack of marketable skills.

Unlike cyclical unemployment, which usually tends to be temporary and short term, structural unemployment is far more persistent, long term, and harder to correct. Accordingly, a principal focus of the new CETA is to actively involve business and industry in developing and implementing programs designed to provide training and jobs for hard to employ persons. The emphasis in CETA has shifted from federally-subsidized public service employment to unsubsidized jobs in the private sector.

Following is a brief description of each Title contained in the reauthorization legislation.

Title I provides the administrative and general provisions which apply to all sections of the law.

Title II of CETA provides for comprehensive employment services to enable qualified low income persons to secure jobs at their maximum capacity. Prime sponsers are given substantial flexibility in planning and may include such activities as outreach, counseling, orientation, on-the-job training, work experiences, classroom training and supportive servies in their program designs. Part D of Title II provides transitional public service jobs and related training to the economically disadvantaged. All of these activities may be coordinated with apprenticeship programs.

Title III provides for special Federal responsibilities toward identified targeted groups to be met, and identifies research and evaluation objectives.

Title IV provides for programs directed toward youth which can also be examined closely to determine where ties with apprenticeship programs may be effectuated. The program models presented later in Chapter III may provide you with some insights for planning local arrangements. This Title also continues the Job Corps.

Title V authorizes the National Commission for Employment Policy which advises the President and Congress on national employment and training issues.

Title VI provides cyclical public service employment and related training to unemployed and low income individuals.

Title VII is a major initiative of the law, the establishment of the Private Sector Initiative Program (PSIP), which is intended to create a partnership between prime sponsers and private business organizations. CETA sponsers will appoint a Private Industry Council (PIC) to assist in meeting the goals established for the private sector program.

Title VIII provides for the creation of the Young Adult Conservation Corps which offers employment to youth in conservation work on public lands.

The above material was taken directly from the Apprenticeship and CETA Technical Assistance Guide, U. S. Department of Labor, 1979.

The following section describes the use of CETA funds in Maryland.

In Public Law 95-524, Congress made provision for supplemental vocational education assistance in Section 204 of Title II. With funds granted to the Governor by the Labor Department, the Vocational-Technical Division, Maryland State

Department of Education, makes arrangements to provide needed vocational education and services in areas served by Prime Sponsers.

The vocational education services are provided to the Balance of State and the other four Prime Sponsers as delineated in an agreement between the Maryland State Department of Education and the Chairman of the State Manpower Services Council.

A nonfinancial agreement is negotiated between the Vocational-Technical Division, Maryland State Department of Education and the five Prime Sponsers. The nonfinancial agreement outlines specific services to be provided to the Prime Sponser by Vocational-Technical Education. One of the services that is provided or arranged for by the Vocational-Technical Division is institutional training. Institutional training may include occupational skill training, basic education, counseling, related instruction, and work experience.

The type of occupational training to be provided to Balance of State residents is determined by a functional Balance of State Planning Council and Council Subcommittees. The Council membership is chosen to reflect the situations and needs of the area and they have access to information on labor market supply and demand. This insures occupational training that will most likely lead to employment of the participants.

Institutional training can take one of two forms, either class size or individual referral. If labor market demand is not great enough to justify a full class project, the Prime Sponser may elect to request Individual Referral training.

For class size training, the CETA staff of the Vocational-Technical Division, Maryland State Department of Education, arranges for the training to be provided in accordance with the Prime Sponser agreement by contacting appropriate approved training agencies, such as, community colleges, boards of education, nonpublic schools, hospitals, etc.

The State Vocational Education staff works with the staff of the training agency to prepare a budget and course of study. The training agency is reimbursed for the training costs by the State Department of Education in accordance with the budget and the approved project. The CETA staff of the Vocational Division also arranges for institutional training with Prime Sponser Title I funds when requested to do so by the Prime Sponser.

The CETA Vocational-Technical Education staff arranges for individual training when the designated Balance of State

Employment Service Office notifies the Vocational Division that they have a CETA client that needs training in a specific occupation. An agreement is made by the Vocational Division with an approved training agency which can provide the training needed by the participant to secure employment.

C. Cooperative Education

Cooperative vocational education involves cooperative arrangements between the school and employers, enabling students to receive vocational instruction in the school and on the job through part-time employment. This instruction is planned, organized, and coordinated to assure that each component contributes to the student's education and employability. Cooperative education is provided in one of three major formats. The formats are capstone, integrated, and diversified.

Capstone. The on-the-job component of the program is subsequent to student completion of the in-school, skill development component. Students are placed at training sites which have potential to extend and refine the competencies which were developed in the in-school component.

Integrated. The on-the-job component of the program is entered after some in-school skill development and the in-school skill development component is maintained concurrent with on-the-job experience. Students are placed at training sites which have potential to complement the in-school component.

Diversified. The major portion of skill development is provided through on-the-job work experience. The in-school component is concurrent with the on-the-job component and is related to the occupational placement. The occupational placements are targeted on employment opportunities for which an in-school program does not exist.

Staffing Options

1. Teacher-Coordinator. A teacher-coordinator is responsible for providing in-school vocational instruction and coordinating on-the-job experience (integrated and diversified programs).

2. Coordinator. A coordinator is responsible for coordinating on-the-job experience. Another teacher is responsible for the in-school vocational instruction component of the program (capstone programs).

Coordination. Adequate time is provided for coordination of the on-the-job component. The number of hours of coordination time per student is within the following standards:

Coordination Hours Per Week	Students Coordinated
5	1-15
10	16-30
15	31-45
20	46-60
25	61-75

Administration

1. A written training plan has been developed cooperatively by the teacher and employer for both the classroom and on-the-job training. The training plan includes: a) length of training, b) skills to be learned through on-the-job training and work experience, and c) skills and knowledge to be taught in the classroom. The completed training plan is maintained in each cooperative student's folder.

2. Students receive appropriate compensation for work performed as student learners.

3. The coordinator is required to visit students where employed (at least four times per year) to observe the students at work and to confer with the employer.

4. A written evaluation of each student's on-the-job training is completed by the coordinator and employer for each grading period.

5. Each student is covered by applicable work permit and/or student learner permit as required by state and federal labor laws. The cooperative coordinator makes every effort to assist the employer in complying with labor laws as they apply to minors in cooperative programs.

6. Each cooperative vocational education program provides on-the-job training that:

   a. Is related to existing employment opportunities which offer promotion and advancement.
   b. Is related to the student's occupational objective.
   c. Does not displace other workers who can perform such work.

7. Students receive credit for the on-the-job segment, as well as, the in-school segment of cooperative programs.

Special Provisions for Cooperative Vocational Programs Receiving a Supplemental Grant under Section 122, P.L. 94-482.

1. Funding priority consideration is given to those counties (including Baltimore City) experiencing relatively high dropout rate and high youth unemployment.

2. Provision is made for participation of students from nonprofit private schools in co-op programs (written evidence that private school students were given due consideration).

The above information and the information below were both provided by the Maryland State Department of Education, Division of Vocational-Technical Education.

D. Industrial Training.

Maryland's Industrial Training Program grew out of a need to stimulate the State's economy. It encourages new industries to locate here and existing industries to consider expanding in the State by offering training assistance.

The program includes financial support from the State of Maryland to companies to establish training for the required job skills. The goal is to create an internal training function that will be self-sufficient when the State contract expires, frequently at the end of one year.

To accomplish this, Maryland provides support to the company in areas such as job/task analysis, instructor training, curriculum evaluation and development, program development, implementation and program evaluation. Under the direction of a State Coordinator for Industrial Training, support is delivered through a network of regional field coordinators, a central staff experienced in start-up training and participating local education or private agencies. The entire program is headed by a coordinating council composed of representatives from the State Department of Education, Employment Security Administration, Department of Economic and Community Development and State Board for Community Colleges.

Since its inception in 1969, 7,220 people in forty-two companies have been trained under the program. Through expansions these jobs have resulted in over 20,225 new jobs for Marylanders.

The State of Maryland and its counties have gained substantial benefits through increased tax revenues and economic expansion in areas of high unemployment.

Program Impact

The foregoing material shows that the four alternative delivery systems differ substantially in their sources of funding, program goals, populations served, and overall educational philosophy. The present study assesses the differential impact of the delivery systems on program participants. The aim of the study was to see if participants in the different programs differed in terms of satisfaction with their program and in terms of employers' ratings of the job performance of program graduates. Also, the effect of demographic and personality characteristics on satisfaction and performance ratings was examined.

In the interest of integrating this study with the previous study of quality indicators, the results of the study are discussed in the context of differences among programs on the kinds of program quality indicators each stresses. That is, the differences in satisfaction and performance ratings that are found may be due to the types of quality indicators each delivery system finds important. Discussion of the issue is frankly speculative and interpretive, but lays a groundwork for future research.

Finally, based on the results of the study, recommendations for each delivery system are made.

Survey Instruments

Two survey instruments were created specifically for this study: a trainee/worker survey form and an employer/supervisor rating form. These two forms can be found in Appendix B. The worker survey form was designed to assess two types of information--demographic and personality characteristics of the worker, and his or her satisfaction

with training received from the alternative vocational education delivery system. The nature of the demographic and personality variables, the procedures for scoring these variables, and the rationale behind their use are described in Part A of the Results section.

The supervisor rating forms provide five dimensions on which job performance can be assessed. These five dimensions were derived from a Maryland State Department of Education Employer Follow-Up Questionnaire (see Appendix A). The first dimension, knowledge of job duties, condensed items A1, A2, and A3 from the older form. The second dimension, quickness in learning new job skills, condenses items B1, B2, and B3 from the older form. The third dimension, work attitude, attendance, and dependability, condenses items C1, C4, and C5 from the older form. The fourth dimension, ability to get along with others, condenses items C2 and C3 from the older form. The first two dimensions cover the worker's intellectual/technical ability; the latter two cover emotional/interpersonal competence. Workers could be rated on a scale from 1 (does not meet job requirements) to 5 (exceeds job requirements). Finally, a fifth dimension, adapted from part D of the old form, allowed an overall assessment of training preparedness (1 = poorly prepared; 2 = well prepared; 3 = exceptionally prepared).

Information gathered from these two survey instruments provides a means of assessing the impact of three factors--vocational program type, demographic background, and personality--on two outcome categories: trainee satisfaction and employer ratings of job performance. Thus, these instruments allowed a comparison of the

effectiveness of different delivery systems for vocational education, where effectiveness is defined as satisfaction and ratings of job performance. Moreover, the moderating influence of sex, race, activity preference, and other demographic and personality variables on the effectiveness of each delivery system can be examined. Although the situation is not a controlled experiment, multivariate statistics allow for a comparison of the relative effects of program type, demographics, and personality on satisfaction and performance.

Because these two survey instruments are new, their reliability and validity are as yet untested--though the older employer ratings form was found to have excellent reliability. Results of the study should therefore be interpreted with caution.

Population Sample

With the help of several program administrators[3], representative sample programs were identified. Immediate program directors/coordinators were contacted and initially 10 programs agreed to participate in the survey: 3 Apprenticeship programs, 2 CETA programs, 2 Cooperative Education programs, and 3 Industrial Training programs. Forty trainee/worker and employer/supervisor rating forms were prepared and distributed. Because individuals in Apprenticeship and Industrial Training programs could not be expected to stop work to

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[3]The following individuals were primarily responsible for identifying sample populations and are to be thanked: Georgia Duffee, Apprenticeship; Joe Olenski, CETA; George Gabriel, Cooperative Education; and Dave Webster, Industrial Training. Nancy Pinson was instrumental in contacting these individuals, and many others helped at various stages along the way. Hopefully, their names are all included in the acknowledgements section of this report.

complete the surveys as a group, these people answered the surveys privately and mailed the survey forms directly back to the principal investigator. Supervisors were briefed on the use of the rating form; the forms were mailed in when completed.

From the original sample, 1 Apprenticeship, 1 CETA, and 2 Industrial Training programs changed their minds about participating, or otherwise failed to return the survey materials. Attrition in mail-backs resulted in the following number of useable surveys (the first number in the parentheses is the number of trainee/worker forms; the second is the number of supervisor rating forms): Apprenticeship (52, 77), CETA (30, 30), Cooperative Education (47, 52), and Industrial Training (26, 40).

The sample sizes are admittedly small; as such, no claims can be made about generalizing the results of this study to all vocational programs. Nonetheless, the particular programs sampled are representative in the sense that the program administrators regarded these programs as "typical." Also, the sample sizes are large enough by most standards to employ both descriptive and inferential statistics. Clearly, caution is required concerning the generalizability of the study, but there is certainly no deliberate sampling bias that would slant the results.

Analyses

Statistical analyses were performed to answer three general questions:

1. Do program participants differ in terms of demographic and personality characteristics?

2. Do program participants differ in terms of job performance ratings and worker satisfaction?

3. What factors account for differences in job performance ratings and worker satisfaction?

Results

A. Group differences in demographic and personality characteristics.

The composition of the four program types were first examined for differences in age, sex, race, education, and father's socio-economic status. Table 2 summarizes these differences.

The statistics in Table 2 show that, compared to the total sample, the apprenticeship participants are about average in age, predominantly white and male, generally better educated, and are from homes of relatively high socioeconomic status. The all-female CETA sample is average in age, mostly black, slightly less educated, and are from relatively poor families. The cooperative education participants are younger than the others, mostly white, split 50-50 on sex, and are about average in SES. Participants from industrial training are older than the others, mostly white, are the best educated, and are from the highest SES backgrounds. These differences--and other personality differences discussed below--are important for understanding differences in job performance ratings and satisfaction. Because the four types of programs differ in demographic characteristics, the effect of these variables must be controlled when examining the effect of the delivery system per se on job performance ratings and satisfaction of the worker.

Next, the samples were examined for personality differences. Time constraints prevented the administration of standard, validated personality inventories. The personality items used in the present survey form represent attempts to assess theoretically

Table 2 Demographic Characteristics

Program	N	Age[a] Range	Age[a] Mean	Race[b] Nonwhite	Race[b] White	Sex[c] Male	Sex[c] Female	Education[d] Elm	Education[d] HS	Education[d] Coll	Father's SES[e]
Appr'ship	52	16-35	23.3	16%	84%	90%	10%	98%	96%	23%	3.8
CETA	30	18-33	23.9	83	17	0	100	100	70	0	3.1
Coop. Ed.	47	16-19	17.1	9	91	50	50	100	100	2	3.4
Ind. Tr'ing	26	16-56	29.1	8	92	62	38	100	96	38	3.9
TOTAL	155	16-56	22.5	26%	74%	56%	44%	99%	92%	15%	3.6

[a]Age in years. Analysis of variance showed $F(3,151) = 34.89$; p less than .0001, indicating significant differences among groups.

[b]Race as percent of that sample. Chi-square with 12 degrees of freedom = 81.47; p less than .0001, indicating significant differences among groups when all categories of race are considered. Breakdown on nonwhite raw frequencies are as follows: apprenticeship, 6 Black, 1 Asian, 1 American Indian; CETA, 24 Black, 1 Spanish; cooperative education, 2 Black, 2 American Indian; industrial training, 2 Black.

[c]Sex as percent of that sample. Chi-square with 3 degrees of freedom = 63.24; p less than .0001, indicating significant differences among groups. According to administrative sources and statewide statistics, sex ratios are representative of each population except the CETA program. This all-female class were training to become secretaries and receptionists.

[d]Percentage of each sample with elementary school, high school, and college education. When elementary school is assigned a value of "1", high school, "2", and college, "3", mean scores for apprenticeship, CETA, cooperative education, and industrial training programs are 2.2, 1.7, 2.0, and 2.4, respectively. The F value with (3,150) degrees of freedom is 16.30; p less than .0001), indicating significant differences among groups.

[e]Father's occupations were coded for SES using Holland's (1973) codes for educational level. Levels 5 and 6 mean college training is necessary (e.g., mechanical engineer). Levels 3 and 4 mean high school and some college, technical, or business training is needed (e.g., electrician). Levels 1 and 2 mean that an occupation requires only elementary school training or no special training at all (e.g., janitor). Analysis of variance on these scores showed an F (3,125) of 5.00; p less than .01, indicating significant differences among groups.

significant variables in the personality theory literature. However, the items used in this study have not been pretested for reliability and validity; hence, these results should be interpreted with the greatest caution.

The personality scores in this study were generated in the following manner. Holland's (1973) vocational personality types were estimated in two ways. Each subject's ideal occupation was coded with Holland's occupation finder for its resemblance to the Realistic, Investigative, Artistic, Social, Enterprising, and Conventional types. A description of the personality characteristics of these types is available in Holland's 1973 book; for here, a thumbnail sketch of each type will suffice. Realistic types are asocial, literal-minded, masculine; Investigative types are curious, analytical, introverted; Artistic types are imaginative, complicated, disorderly; Social types are friendly, cooperative, outgoing; Enterprising types are ambitious, exhibitionistic, dominant; and Conventional types are orderly, controlled, conservative.

Each individual received six scores based on their ideal occupation, which had been coded with Holland's occupational finder. A "6" was assigned to the predominant type, a "5" to the second most salient type, a "4" to the third most salient type, and scores of "1" to the remaining types. For example, if a person's ideal job was electrician (RIS type in Holland's coding system), that person received a Realistic score of "6", Investigative score of "5", Social score of "4", and a "1" for the remaining three scores.

Holland types were also estimated by asking people to rate how much they liked the following activies: operating machinces (R),

doing science (I), creating art (A), helping people (S), being in charge (E), and being organized (C). People placed a "3" next to activities they enjoyed, a "2" next to activities they felt indifferent toward, and a "1" next to activities they disliked. Thus, six additional scale scores were generated for estimating each person's resemblance to the Holland types.

Several other types of vocation-personality variables were measured. The job the person was presently training for was coded according to its Holland type and this profile was compared to the ideal job profile and activity preference profile. By subtracting the corresponding 6 scale scores, squaring the results, and adding them together, "difference scores" (see Cronbach & Gleser, 1953) were created, showing the degree of fit between the job for which the individual was preparing and his/her ideal job and activity preferences. High scores on these two scales would indicate a large discrepency between career aspirations and actual job for which the person was training or between activity preferences and job for which the person was training. The first score is therefore called "real-ideal job discrepency," and the second, "job-activity preference discrepency."

Next, the status (educational level from Holland's occupation finder) of the ideal job was subtracted from the status of the job for which the person was preparing. This creates an index of status satisfaction and realism, wherein a high score would mean that the person's status aspirations did not exceed their present training. This could be interpreted as lack of ambition, but alternatively as possession of realistic aspirations, good adjustment, and general satisfaction.

Maturity/differentiation of vocational interests was estimated by computing a standard deviation score for each individual on his/her activity preferences. Holland has found that highly differentiated individuals (those who clearly prefer some activities to others) have a more integrated, stable vocational identity, and tend to be more satisfied with their career decision-making.

Academic motivation was estimated by asking the individual how much he or she liked school, on a scale of 1 (not at all) to 4 (a lot). Gough (1975) has shown that liking school is generally a powerful predictor of success in many spheres of life.

Socialization (one's respect for rules and authority) was estimated by asking the individual how often he or she got into trouble growing up. Responses could range from 1 (not at all) to 4 (all the time). Because of the direction of scoring for this item, the scale is labeled "Socialization Problems." Again, Gough has shown that behavior problems with authority while growing up indicate a personality disposition that affects a person throughout his or her life.

Table 3 summarizes differences among the sample groups with respect to these personality variables. The table shows that the four delivery system samples differ along several personality dimensions. For example, the cooperative education sample showed a far greater discrepency between ideal job and actual job for which they were training and between the status levels of the two jobs. They were also much lower in academic motivation and were much higher in socialization problems than the other groups. The existence of such group differences in personality demands that

Table 3 Personality Characteristics

Program	Holland Types[a] R		I		A		S		E		C		Real-Ideal Congruence[b]		Status Realism[c]	Vocat. Diff.[d]	Acad. Motiv.[e]	Social. Problems[f]
	1	2	1	2	1	2	1	2	1	2	1	2	1	2				
Appr'ship	4.3	2.4	3.2	2.0	1.9	2.1	2.9	2.7	3.9	2.6	1.8	2.7	41.7	27.4	- .27	12.43	2.96	2.20
CETA	1.2	2.8	2.3	1.8	2.1	2.4	3.9	2.9	3.7	2.2	4.8	2.8	38.6	27.6	.00	12.79	3.20	2.23
Coop. Ed.	3.2	2.4	3.2	1.7	2.3	2.2	3.7	2.7	2.4	2.3	3.1	2.7	47.3	26.3	-1.17	11.68	2.30	2.50
Ind. Tr'ing	3.9	2.5	4.3	2.2	1.8	2.2	2.7	2.9	3.4	2.7	2.9	2.8	41.6	26.8	- .71	13.39	3.31	1.92
TOTAL	3.2	2.5	3.2	1.9	2.0	2.2	3.3	2.8	3.3	2.4	2.9	2.8	42.6	27.0	- .59	12.43	2.87	2.25

---

[a] Mean scores under column 1 are based on salience of types in Holland code for ideal job. Individual scores could range from 1 to 6. Mean scores under column 2 are based on activity preferences, and could range from 1 to 3 for an individual. F tests showed significant differences among groups for the following variables: Realistic (1); Investigative (1); Social (1); Enterprising (1) and (2); Conventional (1) (p less than .05 in all cases).

[b] Mean scores under column 1 are based on the difference between Holland profiles for ideal job and job training for; under column 2 on the difference between activity preferences and job training for. Individual scores were computed by Cronbach & Gleser's (1953) method; higher scores indicate greater differences between the profiles. F tests showed no significant differences among groups on either measure.

[c] Mean scores for status realism are based on the difference between the education required for an individual's present job (job training for) and the education required for an individual's ideal job. A positive number indicates that individuals' aspirations are no higher than the jobs they are pursuing; a negative number indicates that aspirations exceed the present jobs they are pursuing. An F test showed significant differences among groups (p less than .02).

[d] Mean scores for vocational differentiation are based on the standard deviation of ratings for activity preferences. A larger number means higher differentiation of interests. An F test showed no significant differences among groups.

[e] An F test showed significant differences among groups on mean scores for academic motivation (p less than .001).

[f] An F test showed no significant differences among groups on mean scores for socialization problems.

these characteristics be taken into account when examining program outcomes in terms of job performance ratings and worker satisfaction.

B. Group differences in job performance ratings and worker satisfaction.

Two overall measures of the success of the different training programs are (a) the respondents' satisfaction with their job training and (b) employer ratings of their job performance. Satisfaction was assessed in three ways: (1) rating from 1 (very unhappy) to 4 (very happy) satisfaction with the training program; (2) rating from 1 (no way) to 4 (yes, definitely) a willingness to return for further training; and (3) whether spontaneous comments were highly critical (scored "1"), neutral (scored "2"), or highly laudatory (scored "3").

Supervisors rated workers from 1 (poor) to 5 (excellent) on (1) knowledge of job duties; (2) ability to learn quickly; (3) work attitude, attendance, and dependability; and (4) ability to get along with others. Supervisors also rated trainees on a scale from 1 to 3 on overall work performance.

Altogether then, there were three measures of worker satisfaction and five measures of job performance. Table 4 shows the relationships among these outcome measures.

Table 4 Intercorrelations of Outcomes

	Worker's Reactions			Supervisors' Ratings				
	Satisfaction	Willing to Return	Spont. Comment	Knowledge	Quickness	Attitude	Interpersonal	Overall
Satisfaction	1.00**							
Return	.61**	1.00**						
Comments	.63	.67	1.00					
Knowledge	- .03	- .18	- .28*	1.00**				
Quickness	.02	- .12	- .24*	.76**	1.00**			
Attitude	.05	- .18	- .32	.72**	.72**	1.00**		
Interpersonal	.04	- .03	- .17*	.62**	.62**	.75**	1.00**	
Overall	- .07	- .25	- .31	.64	.58	.57	.51	1.00

* p less than .01; ** p less than .001. N = 154 for all worker reaction correlations except with comments (N=91). For supervisor ratings, N = 199.

Table 4 indicates that the three measures of worker satisfaction are highly interrelated, and that the five supervisor ratings are also highly interrelated. But, these two clusters of outcome variables are relatively independent of each other. This means that whether a worker was highly satisfied with his/her training or highly dissatisfied with the training, these program training ratings were not reflected in the supervisors' ratings of job performance.

Table 5 shows differences between groups on the above outcome measures. For comparison, supervisor ratings obtained from the archival vocational education student data are included, although these scores are not strictly comparable (see Appendices A and B).

Table 5 Group Differences in Outcomes

Variable	Appr'ship	CETA	Coop. Ed.	Ind. Tr'ing	VocEd[a]	F-test
Worker Reactions	(N=52)	(N=30)	(N=47)	(N=26)		
Satisfaction	2.83	3.63	3.09	3.27		8.92**
Return	3.01	3.83	3.32	3.69		9.73**
Comments	1.93	2.92	2.81	2.38		12.76**
Supervisor Ratings	(N=77)	(N=30)	(N=52)	(N=40)	(N=823)	
Knowledge	3.81	3.00	2.96	3.15	3.67	11.02**
Quickness	3.77	3.03	3.19	3.83	3.97	7.59*
Attitude	3.74	2.83	3.25	3.53	4.10	7.41*
Interpersonal	3.70	3.30	3.31	3.50	4.03	3.19
Overall	2.27	1.87	1.77	1.98	2.36	8.22**

*p less than .001; **p less than .0001.

[a]not included in analysis of variance.

The F-test statistics in Table 5 show significant differences among groups on nearly all of the outcome variables. The question remains, however, are these differences due to program characteristics per se, or to differences in the demographic and personality characteristics of those electing such programs?

Several procedures were used to get at the "cause" of differences in program satisfaction and job performance ratings. The first procedure, and analysis of covariance, assesses the effect of a major variable of interest (here, type of delivery system) on the outcomes (satisfaction, performance ratings), after removing the effects of several covariates (e.g., demographic and personality variables). Two such analyses of covariance were performed, one using demographics as covariates, and the other using personality variables as covariates. Table 6 presents all cases where either the type of delivery system or a covariate accounted for significant differences in the outcome variables.

Table 6 Effects of Program Type with Demographic and Personality Covariates

Demographic Analysis

Variable to be Explained	Variables with Significant Effects (p less than .01)
Worker Reactions	
Satisfaction	none
Return	Program type
Comments	Program type
Supervisor Ratings	
Knowledge	Race, Program type
Quickness	Race, Program type
Attitude	none
Interpersonal	Education
Overall	Race, Program type

Personality Analysis

Variable to be Explained	Variables with Significant Effects (p less than .01)
Worker Reactions	
Satisfaction	none
Return	Program type
Comments	Program type
Supervisor Ratings	
Knowledge	Program type
Quickness	Artistic interests, Program type
Attitude	Program type
Interpersonal	none
Overall	Program type

It appears from Table 6 that type of program (i.e., delivery system) has a consistent effect across both satisfaction and performance variables, but that race, education, and vocational interests affect only the performance outcomes.

A second method for comparing the contribution of program type versus other variables is a regular multiple-factor analysis of variance. Because sex and race are two important potential confounds of program effect, eight 4 X 2 X 2 (Program X Sex X Race) analyses of variance were performed, one for each outcome. The results, presented in Table 7, again show that type of program consistently affects most outcomes, but race affects only two performance outcomes (knowledge and overall performance). Sex affects only one outcome (learning speed).

Table 7 Program X Sex X Race Analyses of Variance

	F-tests for Main Effects		
Variable to be Explained	Program	Sex	Race
Worker Reactions			
Satisfaction	2.60*	2.10	1.75
Return	5.57**	1.08	2.61
Comments	5.97	.07	1.07
Supervisor Ratings			
Knowledge	6.74***	.00	15.18***
Quickness	7.15***	4.42**	.31
Attitude	2.64	.00	3.85
Interpersonal	1.55	.03	1.45
Overall	7.94***	.00	9.98**

*p less than .05
**p less than .01
***p less than .001

Finally, if there are genuine race or sex effects independent of program type, there should be race or sex differences on the outcome variables within each program type. T-tests between males and females and between whites and non-whites were computed for each outcome measure. Table 8 lists all cases where one group outscored another. With one exception, all race and sex differences are found in the apprenticeship program. Nonwhites in this program are more satisfied, but whites received

Table 8 T-tests for Sex and Race Differences

Variable	Race Differences: Group scoring higher[a] Appr'ship	CETA	Coop. Ed.	Ind. Tr'ing
Worker Reactions				
Satisfaction	Black*	-----	-----	-----
Return	Black***	-----	-----	-----
Comments	-----	-----	-----	-----
Supervisor Ratings				
Knowledge	White***	-----	-----	-----
Quickness	White***	White*	-----	-----
Attitude	White***	-----	-----	-----
Interpersonal	-----	-----	-----	-----
Overall	White**	-----	-----	-----

Variable	Sex Differences: Group scoring higher Appr'ship	CETA	Coop. Ed.	Ind. Tr'ing
Worker Reactions				
Satisfaction	-----	-----	-----	-----
Return	Female*	-----	-----	-----
Comments	-----	-----	-----	-----
Supervisor Ratings				
Knowledge	-----	-----	-----	-----
Quickness	-----	-----	-----	-----
Attitude	-----	-----	-----	-----
Interpersonal	-----	-----	-----	-----
Overall	-----	-----	-----	-----

*p less than .05; **p less than .01; ***p less than .001.

[a]"Black" actually refers to all nonwhite respondents, though Blacks make up a majority of the nonwhite portion of the sample (see Table 2).

higher performance ratings. It appears, then, that if race and sex affect satisfaction and performance, this effect is limited to apprenticeship training (sex differences in CETA remain unexplored, however, because all of the CETA respondents in this study were female).

In summary, the group differences in outcomes, noted back in Table 5, appear to be a genuine function of program type, and not an artifact of demographic or personality differences. The data in Table 5 can now be

interpreted in terms of program effectiveness.

With regard to the three measures of satisfaction (rated satisfaction, willingness to return, and spontaneous positive comments), the CETA group scored consistently highest, followed by industrial training, cooperative education, and apprenticeship. Several examples of spontaneous comments demonstrate these group differences.

From CETA respondents:

> The training program has made me better myself and to know more about what I want out of life.
>
> I think that the program is great! I only wish that it could go on forever, and that this type of training could be available for everyone who has missed out on opportunities as I have.

From industrial training respondents:

> Training seminars for people with average or less education are very beneficial to the person and the company for which he works.
>
> It is my feeling that these classes would be a help to anyone who has the chance to take them.
>
> I wish they had classes for training in group leadership. I enjoy my job very much. I get a lot of self satisfaction from my job. The days never seem long enough sometimes.

From cooperative education respondents:

> I feel that the co-op program has helped me not only financially but also thru school. Without the co-op program I would have never made it.
>
> The program has helped my attendence a lot.

From apprenticeship respondents:

> There should be more demonstrations of materials, tools, and anything that has to do with it.
>
> The program through the first 3 years was a review of material covered in the first year of vocational school.
>
> They should have shop classes set up so you could see how something actually works instead of just reading about it.

Turning to the performance ratings, there is a surprising reversal. The apprenticeship sample, which gave the most complaints and lowest ratings of satisfaction, received the highest ratings for performance. Workers in the industrial training setting received the next highest ratings, and CETA and cooperative education workers re- received the lowest ratings. It appears that the most disadvantaged group--CETA--feel fortunate to have the opportunity to receive job training, and therefore report the highest level of satisfaction; however, their lack of skills shows up in the low supervisor ratings. It should be pointed out that these CETA workers had not completed their training when they were rated and therefore may have shown some improvement later. Nonetheless, the supervisors were instructed to take that into account, and still gave relatively low ratings. Given the fact that CETA workers enormously appreciate their training, and only a small group was sampled in the middle of their training, final judgment about CETA program effectiveness should be reserved for larger-scale studies.

The lack of congruence between apprenticeship satisfaction and job performance ratings can be explained by looking at their spontaneous comments and by refering to Holland's (1973) theory of vocational interests. Many apprenticeship workers complained that they were being treated like schoolchildren rather than like adults, that there should be more hands-on experience in the classroom, and that the classroom component of their training was generally irrelevant. A look at this group's Holland code shows that they are predominantly Realistic, and score higher on this dimension than any other group. Holland notes that Realistic types enjoy activities involving physical manipulation

with concrete results, and have little patience for abstract "book-learning." Given this group's supervisor ratings, which show a high level of work competence, it is understandable that these workers are dissatisfied with their classroom work.

C. Accounting for differences in performance and satisfaction.

The previous two sections demonstrate genuine group differences in performance ratings and satisfaction, over and above social-demographic and personality factors. Two questions remain, however. First, what is it about these delivery systems that accounts for differences in outcomes? A full answer to that question would require an empirical comparison of the features and components of each delivery system. Since that data is not available, we can only analyze the program descriptors presented in the beginning of this report and assume that the present samples are following uniform program standards or guidelines of operation. This analysis, which is presented in the next section of the report, will be guided by the framework of quality indicators, discussed in the previous report.

The present section addresses a second question: to what extent do demographic and personality factors affect satisfaction and performance ratings across different training settings? These influences may not be as powerful as the type of training program, but given that data is available, and that this question is seldom addressed in education, the effects of demographics and personality will be examined.

Table 9 shows the relationship between demographic characteristics and program outcome variables.

Table 9 Demographics and Outcomes

Outcome Variable	Age	Education	SES	Sex[a]	Race[b]
Worker Reactions					
Satisfaction	.18*	-.19*	-.13	.32***	-.28***
Return	.05	-.12	-.17*	.29***	-.31***
Comments	.23**	-.24*	-.17	.37***	-.33***
Supervisor Ratings					
Knowledge	.17*	.26***	.06	-.19*	.30***
Quickness	.21**	.31***	.03	-.20**	.34***
Attitude	.07	.33***	.14	-.22**	.30***
Interpersonal	.18*	.25***	.00	-.13	.13
Overall	.15*	.25***	.12	-.17*	.23**

*p less than .05; **p less than .01; ***p less than .001

[a]Scored 1 = male; 2 = female

[b]Scored 1 = nonwhite; 2 = white

Table 9 shows that worker satisfaction tends to be higher for those who are older, are not highly educated, are from lower socioeconomic backgrounds, are female, and who are black. This pattern was undoubtedly influenced by the all-female, predominantly black, disadvantaged CETA sample. Nonetheless, the correlations in Table 9 include all five samples (over 150 persons) and therefore represent general demographic effects across delivery systems. In general, it would appear that underpriveleged groups and minorities--blacks, women, the poor, the uneducated, and older workers--tend to appreciate their training the most.

The relationships between demographics and job performance ratings show contrasts to the patterns presented above. The only similar pattern is between age and performance ratings, with older workers receiving higher ratings. This points to importance of experience. Higher ratings were also associated with more education, being male, and being white.

This pattern of relationships suggests that, although underpriveleged groups and minorities are more satisfied with their training, their lack of opportunities and underpriveleged status also leads to lower ratings of job performance. Further research is needed to determine whether these underpriveleged groups actually demonstrate lower levels of job performance, or whether their supervisors showed biases in the performance ratings. Objective, valid measures of job performance are needed to answer that question.

The relationships between demographics and performance ratings, though statistically significant, are of relatively small magnitude. The relationships between personality variables and outcome variables, presented in Table 10, are even weaker.

Three findings in Table 10 merit discussion. First, people who reported that they enjoyed school growing up (were academically motivated) reported higher degrees of satisfaction with their training programs. Evidently, there are enough similarities between public schools and training programs such that people who felt comfortable in the former feel comfortable with the latter.

Second, there is a consistent but negative relationship between reports of getting into trouble growing up with both satisfaction and performance. This indicates that a personality disposition Gough (1975) calls socialization may affect a range of relationships with authority figures, including relationships with parents and teachers in childhood and relationships with supervisors in adulthood. One supervisor commented on the importance of the work attitude and ability to get along with others items on the supervisor rating sheet. He said that those areas cause more trouble than lack of technical knowledge and skills.

Table 10 Personality and Outcomes

Outcome Variable	Holland Types[a]						Real-Ideal Congruence[b]		Status Realism[c]	Vocat. Diff.[d]	Acad. Motiv.[e]	Social. Problems[f]
	R	I	A	S	E	C	1	2				
Worker Reactions												
Satisfaction	.09	.05	-.08	.10	.00	.06	-.12	-.17*	.24*	.05	.24***	-.15*
Return	.04	-.01	-.05	.12	.07	.13	-.07	-.13	.16	.07	.20**	-.14*
Comments	.14	-.01	.01	.06	-.18*	.12	-.03	-.06	.24	-.02	-.02	.04
Supervisor Ratings												
Knowledge	-.01	.08	-.07	.11	.16*	.27***	-.10	-.10	.18	.16*	.02	-.14*
Quickness	.02	.09	-.17*	.09	.12	.25***	-.12	-.09	.02	.11	.08	-.12
Attitude	-.12	.15*	-.12	.08	.03	.11	-.13	.04	.10	.02	.00	-.10
Interpersonal	-.01	.08	-.08	.16*	.03	.20**	-.02	-.03	.07	.09	.04	-.19*
Overall	-.08	.11	-.06	.16*	.14*	.14*	-.12	.01	.12	.12	.07	-.18

*p less than .05; **p less than .01; ***p less than .001

[a] Holland types estimated from activity preferences.

[b] Column 1 based on congruence between Holland profiles for ideal job and job training for; column 2 based on congruence between activity preferences and job training for (see footnote b in Table 3, page 35, for a fuller explanation. Direction of scoring in the present table is such that a positive correlation means that higher congruence is associated with higher satisfaction or performance ratings.

[c] See footnote c in Table 3, page 35, for a complete explanation.

[d] See footnote d in Table 3, page 35, for a complete explanation.

[e] See footnote e in Table 3, page 35, for a complete explanation.

[f] See footnote f in Table 3, page 35, for a complete explanation.

Table 5 shows that all four nontraditional vocational groups scored lower on these two dimensions than the archival vocational high school sample, indicating that perhaps more attention should be paid to social-interpersonal development in nontraditional programs.

Finally, Artistic interests tend to have a negative relationship with outcomes, and Conventional interests have significant, positive relationships with job performance ratings. This replicates an earlier finding (Johnson & Hogan, 1981), showing that for a Realistic occupation, the impulsive, disorganized tendencies of the Artistic type hinder effective job performance, while the organized, controlled tendencies of the Conventional type facilitate job performance.

One last note on the effects of personality and demographic characteristics on outcomes concerns the magnitude of the relationships described above. In short, while they are small, they are significant and meaningful. Many of the variables are assessed with only one item, which inherently leads to measurement error, restricted variance, and attenuation of genuine relationships. The fact that <u>any</u> significant relationships were found between personality variables and outcomes indicates that they are real effects. If longer, standardized measures had been used, the magnitude of these relationships would certainly have been larger. Of course, only future research can evaluate that assertion.

Program Characteristics and Outcomes: Ties to the Quality Indicator Study

A comparison of outcome variables (satisfaction, performance ratings) in the present study shows that apprenticeship workers have the highest performance ratings but the lowest satisfaction, industrial training workers have the second highest satisfaction and performance ratings, cooperative education workers are second highest in the number of positive comments, and CETA workers have the highest level of satisfaction. Apparently, differences in program structure between delivery systems lead to differences in outcome variables. Speculation on the program characteristics responsible for the differences in outcomes is presented below.

An interpretive resume of program descriptions (see Table 11) shows which quality indicators each delivery system stresses: (1) Apprenticeship programs stress a professionally-oriented staff and genuine, hands-on work experience; (2) CETA programs stress outreach, supportive services, and placement; (3) Cooperative education stresses career planning, record-keeping, and work experience; and (4) Industrial training stresses professionally-oriented staff and curriculum relevancy.

The fact that apprenticeship and industrial training participants received the highest performance ratings can be attributed to the emphasis their programs place on relevant work experience under professionals in the field. The high level of satisfaction in CETA workers can be explained by the supportive, helping orientation of CETA operating procedures. The positive comments from the cooperative education students indicates that these individuals enjoy their work experience. Table 11 charts the hypothesized relationships between program characteristics and outcomes.

Table 11: Delivery Systems, Quality Indicators, and Outcomes

Delivery System	Quality Indicators	Outcomes
Vocational High School	Active Advisory Council Professionally Involved Staff Organized Counseling System Competency-based Curriculum Placement Services	PLACEMENT
Apprenticeship	Professional Staff Work Experience	
CETA	Supportive Services Placement	SATISFACTION
Cooperative Education	Work Experience Career Planning	
Industrial Training	Professional Staff Curriculum Relevancy	JOB PERFORMANCE

The importance of genuine hands-on work experience under the supervision of professionals in the field seems to be a recurrent theme underlying program success. However, junding from some of the participants' comments, classroom work was not always well-integrated with work experience. The classroom component was sometimes regarded as irrelevant and as a waste of time. Perhaps classroom teachers should work more closely with professionals in the field in order to gring to the classroom more relevant knowledge. The original quality indicator study, which showed that the presence of an active advisory council is one of the most important quality indicators, supports the idea that teachers should consult as much as possible with those who have first-hand knowledge of what actually goes on in the field.

A second shortcoming of the four alternative delivery systems is their lack of an organized counseling system, not just for vocational counseling, but interpersonal and personal counseling as well. Table 5 shows that supervisors' ratings of work attitude and interpersonal effectiveness are far higher for vocational high school students than for any of the four alternative delivery systems. This supports the need for special provisions for personal and interpersonal development. In fact, some of the spontaneous comments indicated that program participants would like to have available these kinds of services.

The above comments on program characteristics are somewhat impressionistic and speculative, but, to the extent that they are reasonable inferences, lead to some recommendations.

Implications and Recommendations

Amidst all the details presented in this report, one shouldn't

lose sight of one important finding: the four alternative delivery systems appear to be quite successful, on the whole. On a scale from 1 to 4, ratings of satisfaction with the program average for each group well above 2.5--which would have been just a "so-so" rating. Program participants seem to be quite satisfied with their training. And for the employer ratings of job performance, which could vary between 1 and 5, each group's mean rating was greater than 3--the neutral point. This means that not only were the participants in the study well-satisfied, but that they also tended to exceed the requirements of their jobs.

Against this generally positive backdrop, some suggestions for program improvements can be made. Two points mentioned earlier apply to all programs and deserve to be made again. First, there appears to be a gap between classroom instruction and work experience, such that the former is often regarded by the students as irrelevant. This problem could be lessened by providing teachers with more release time to meet with workers in the field and with other teachers to devise strategies for tying classroom instruction with the work experience component. Second, judging from both employer and worker comments, there seems to be a need for programs aimed at developing interpersonal skills. These programs would include such areas as leadership, working cooperatively with co-workers and supervisors, and career development.

In addition to these two general recommendations, there are some specific recommendations for each delivery system.

A. Apprenticeship. Two common complaints from apprenticeship participants concerned teacher attitudes and teachers qualifications.

A number of individuals felt that their teachers were condescending and tended to treat students like children instead of adults. Given that apprenticeship participants received higher employer ratings than any other group, it would seem that they indeed deserve to be treated like mature working adults, not schoolchildren. Apart from comments about teacher attitudes, several individuals remarked that the teachers were not always well-qualified, that they did not know enough about real working conditions in the field. This problem could be corrected, as suggested earlier, by creating closer ties between the classroom and work experience components of the program.

B. CETA. Given the underpriveleged status of the CETA participants, the results of the present study are encouraging. Although the performance ratings for this program were not as high as for the other programs, they were still good, and the levels of reported satisfaction exceeded all of the other groups. In view of the present data, CETA participants may need extra attention and time to develop their skills to levels comparable to skill levels in other programs, but that the CETA staff are doing a good job and should continue operating as they have been operating.

C. Cooperative education. Participants in the cooperative education program were younger than participants in the other programs, and therefore tended to lack the experience and maturity level of other workers. This lack of vocational maturity showed up in disparity between the type of job training for and the individual's job aspirations, in a tendency to fantasize about occupations whose status levels were much higher than the occupations for which participants were training, and in a relatively low degree of vocational interest differentiation. It

would appear that students in cooperative education would benefit from additional vocational counseling.

D. Industrial training. Of all the programs, the industrial training program seemed to have the least problems. Improvements in industrial training would probably consist of adding additional kinds of training rather than correcting existing problems. For example, several workers expressed an interest in training programs that would help them move up into management positions.

Conclusions

The purpose of the present study was to examine the impact of four alternative delivery systems for vocational education on program participants. Examination of participants' demographic backgrounds showed that the delivery systems are serving different types of populations. Participants' ratings of satisfaction with their program and employers' ratings of job performance indicate that on the whole the alternative delivery systems are meeting the needs of their participants. An examination of program characteristics in the context of program quality indicators suggested specific strategies for improving the effectiveness of each delivery system.

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Appendix A Deriving Quality Indicator Scores

This Appendix presents the scoring system for deriving quality indicator scores from the ETS questionnaire. The leftmost column lists the dimensions of program quality; these dimensions are numbered as they appear in Johnson (1980), with Roman numerals designating the overall dimensions, and Arabic numerals, the subcomponents within each dimension. The next column lists the page of the ETS form from which items are used to represent the dimensions. The last column lists which items on that page were used and describes how they were combined to form scale scores. The ETS form follows this description of scoring procedures; page numbers appear in boldface type in the upper right-hand corner of each page. Items on each page are labeled A. 1, 2, 3, ..., B. 1, 2, 3, ..., etc.; these labels are used in the description of scoring procedures. The Employer Follow Up Form follows the ETS form.

This Appendix also shows, in a similar fashion, how the outcome variables are scored from the ETS evaluation questionnaire.

Program Characteristic	ETS page	Items
I. Advisory Council		
1. Helps Programs	5	A6 + B1 + B2 + B3 + B4 + B5 + B6 + B7 + B8
2. Composition	5	A2 + A5
3. Meetings	5	A3
4. Communication	5	A4
5. Guidelines	5	A5
II. Administration		
1. Written Policies	2	A1 + A2 + A3 + A4
	6	+ (B1 through B17), summed over both pages
2. Eliminate Biases	3	C1 + C2 + C3
3. Support Staff	8	B1 + B2 + B3 + B4 + B5
III. Public Relations		
2. Written Material	7	B1 + B2 + B3 + B4
3. Media Use	7	B5 + B6
IV. Staff		
1. Certification	1	Item 3 - Item 4 - Item 5 + constant, 4
2. Work Experience	1	Item 6
4. Inservice	1	Item 13 + Item 14
6. Professional Orgn.	1	Items 10A through 10H, summed, - Item 9 + constant, 2
7. Student Orgn.	11	C3
V. Facilities		
1. Replicates Work Sit.	10	C4
3. Equipment Inventory	10	A7 + A8
4. Safety	10	A1 + A2 + A3 + A4 + A5 + A6
8. Layout	10	B4

(continued on next page)

Program Characteristic	ETS page	Items
VI. Recruitment		
2. Outreach	8	C2 + C3 + C4
3. Minority Enrollment	8	C1
8. Consider Emp. Oppt.	9	B1
VII. Counseling		
1. Career Planning	8	A7 + A9 + A10
2. Clear Roles	8	A1 + A2
3. Availability	8	-D1 -D2 -D3 -D4 -D5 + constant, 10
6. Job Information	9	C2
7. Number of Counselors	8	F, three parts, summed
8. Needs Assessment	8	A8
VIII. Curriculum		
1. Relevancy	2	D1 + D2
	9	+ A1 + A2 + A3 + B1 + B2 + B3 + C1 + C2 + C3, summed over both pages
2. Task Analysis	2	C1 + C2 + C3 + C4 + C5 + C6 + C7 + C8
	3	+ D1 + D3, summed over both pages
4. Varied Methods	3	Standard deviation of E1 through F10
8. Outside Resources	7	A1 + A2 + A3 + A4 + A5 + C1 + C2 + C3 + C4
10. Written Objectives	2	B1 + B2 + B3 + B4 + B5 + B6
	3	+ A1 + A4 + A5, summed over both pages
X. Student Organizations		
(general)	11	B1 through B7, C1, C2, D1 through D4, E1 through E11, summed
XI. Placement Services		
(general)	8	A6

Outcome Variable	Form & Page	Items
Student Satisfaction		
with curriculum	ETS 12	A1 through A10, summed
with facilities	ETS 12	B1 through B9, summed
with counseling	ETS 12	C1 through C11, summed
with student orgn.	ETS 12	F1 through F8, summed
Employer Ratings		
Knowledge	Follow Up	(A1 + A2 + A3)/3
Quickness	Follow Up	(B1 + B2 + B3)/3
Attitude	Follow Up	(C1 + C4 + C5)/3
Interpersonal	Follow Up	(C2 + C3)/2
Overall	Follow Up	D: 1=3, 2=2, 3=1
Placement		
Female	ETS 8	G, Grand total
Male	ETS 8	G, Grand total

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MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

1

VOCATIONAL EDUCATION INSTRUCTIONAL STAFF

The purpose of this questionnaire is to gather information about the background of vocational education instructors. Please answer all questions. The results of the questionnaire will not be used to evaluate individuals. Thank you for your cooperation.

TO ANSWER THE ITEMS: Please rate and respond frankly to the questions asked. Please mark each item, DO NOT leave an item blank.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and
Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here
and
b) Record Your Number Response Here

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

1 AND 2. MARK YOUR SEX AND RACE. 1. SEX _____ 2. RACE _____

3. WHAT IS THE HIGHEST LEVEL OF EDUCATION THAT YOU COMPLETED?
1. Graduated from High School
2. Standard Professional Certificate
3. Advanced Professional Certificate
4. Graduated, 2 year Junior/Community College
5. Graduated, 4 year College/University
6. Earned a Master's Degree
7. Earned a Doctorate
8. Other: _____

4. ARE YOU CURRENTLY CERTIFIED TO TEACH VOCATIONAL EDUCATION IN MARYLAND?

5. ARE YOU CERTIFIED IN THE VOCATIONAL AREA THAT YOU ARE PRESENTLY TEACHING?

6. HOW MANY YEARS OF ON-THE-JOB EXPERIENCE HAVE YOU HAD IN THE OCCUPATIONAL AREA IN WHICH YOU ARE PRESENTLY TEACHING?

7. HOW MANY YEARS OF TEACHING EXPERIENCE HAVE YOU HAD IN VOCATIONAL EDUCATION?

8. HOW MANY YEARS OF TEACHING EXPERIENCE HAVE YOU HAD IN THE VOCATIONAL EDUCATION PROGRAM IN WHICH YOU ARE CURRENTLY TEACHING?

9. ARE YOU CURRENTLY A MEMBER OF A TRADE OR TECHNICAL ORGANIZATION RELATED TO THE OCCUPATIONAL AREA IN WHICH YOU ARE CURRENTLY TEACHING?

10. IN WHICH OF THE FOLLOWING RELATED PROFESSIONAL ASSOCIATIONS DO YOU PRESENTLY HOLD MEMBERSHIP? (MARK ALL THAT APPLY)
A. _____ E. _____
B. _____ F. _____
C. _____ G. _____
D. _____ H. _____

11. WHAT WAS YOUR MOST RECENT OCCUPATIONAL EXPERIENCE IN THE OCCUPATIONAL AREA YOU ARE PRESENTLY TEACHING?

12. WAS YOUR MOST RECENT OCCUPATIONAL EXPERIENCE ON A FULL-TIME OR PART-TIME BASIS?

13. HOW MANY INSERVICE EDUCATION WORKSHOPS HAVE YOU ATTENDED DURING THE PAST TWELVE MONTHS?

14. HOW MANY DAYS DID YOU SPEND IN THE WORKSHOP?

15. HOW LONG HAVE YOU WORKED IN THIS SCHOOL SYSTEM?

LEA:
SCHOOL:
PROGRAM:
1

1. SEX
FEMALE
MALE

2. RACE
1. American or Alaskan Native
2. Asian/Pacific Islander
3. Black (Not of Hispanic Origin)
4. Hispanic
5. White (Not of Hispanic Origin)

4. YES NO

5. YES NO

6. Less than 3 years; 3 to 5 years; 6 to 8 years; More than 8 years

7. Less than 3 years; 3 to 5 years; 6 to 10 years; More than 10 years

8. Less than 3 years; 3 to 5 years; 6 to 8 years; More than 8 years

9. YES NO

10. PROFESSIONAL ASSOCIATIONS
A. Local Educ. Assoc.
B. State Educ. Assoc.
C. Md. Voc. Assoc.
D. Amer. Voc. Assoc.
OTHER ASSOCIATIONS (MARK THE NUMBER)
E. One
F. Two
G. Three
H. Four or more

11. Less than 1 year; 1 to 2 years; 3 to 5 years; More than 5 years

12. FULL-TIME; PART-TIME; NO RECENT EXPERIENCE

13. NONE; ONE; 2 TO 3; 4 TO 6; MORE THAN 6

14. NONE; 4 DAYS OR LESS; 5 TO 7 DAYS; 1 OR 2 WEEKS; MORE THAN TWO WEEKS

15. LESS THAN 1 YEAR; 1 TO 2 YEARS; 3 TO 5 YEARS; 6 TO 10 YEARS; MORE THAN 10 YEARS

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MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

2

LEA:
SCHOOL
PROGRAM

2

VOCATIONAL EDUCATION PROGRAM GOALS AND OBJECTIVES

The purpose of this questionnaire is to gather information about the development and use of vocational education goals and objectives. Such information will enable vocational educators to improve the field of vocational education. The results of this questionnaire will be used to evaluate vocational education programs, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and
Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here
and
b) Record Your Number Response Here

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

A. HAVE PROGRAM GOALS BEEN WRITTEN?

1. Goals of the program reflect institution's philosophy.
2. Goals of the program are clearly written.
3. Goals of the program are provided to students.
4. Goals of the program are reviewed at least once every five years.

B. HAVE INSTRUCTIONAL OBJECTIVES BEEN WRITTEN FOR THE PROGRAM?

1. Instructional objectives of program are clearly written.
2. Instructional objectives have been prepared for each of the program's courses.
3. Instructional objectives for each course level demonstrate an orderly progression of content covered.
4. Instructional objectives contain a description of the activity to be performed.
5. Instructional objectives contain a description of the conditions under which the activity is to be performed.
6. Instructional objectives contain a description of the standard or level of performance required for employment.

C. WHAT PROCEDURES ARE USED TO INSURE THAT INSTRUCTIONAL OBJECTIVES REFLECT MINIMUM STANDARDS REQUIRED FOR ENTRY-LEVEL JOB PERFORMANCE? (MARK YES OR NO)

1. A task analysis has been used to determine activities that are necessary to perform a given entry-level job.
2. Task analysis was prepared by program instructor(s).
3. Task analysis was prepared with assistance of local technical or craft committee.
4. Task analysis was prepared and reviewed by local employers.
5. We are using a task analysis that was prepared by another education group or institution (V-TECS, DVTE, etc.)
6. Tasks are grouped into modules or clusters of related tasks.
7. Tasks are reviewed by local technical advisory committee, craft committee, or employer representatives.
8. Task-analysis data are used to prepare instructional objectives.

D. WHAT PROCEDURES ARE USED FOR INSURING THE RELEVANCY AND CURRENCY OF INSTRUCTIONAL OBJECTIVES?

1. Instructional objectives are reviewed annually by local technical or craft committee for relevancy and currency.
2. Instructional objectives are reviewed annually by program staff for relevancy and currency.

E. HOW ARE INSTRUCTIONAL OBJECTIVES USED WITHIN THE PROGRAM SETTINGS?

1. Instructional objectives are discussed & presented to students at beginning of each of the program's courses.
2. Instructional objectives are easily accessible within the vocational facility for review by students.
3. Instructional modules or lesson plans are related to specific objectives.
4. Student assessment is based on achieving objectives at predetermined level required for entry-level job performance.

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft
- Other

THIS FORM IS BEING COMPLETED BY:

- Local Personnel
- Visiting Team Person

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MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

3

INSTRUCTIONAL MATERIALS AND METHODS

The purpose of this questionnaire is to gather information about the quality of a vocational education program's instructional materials and methods. This information will help vocational educators improve their programs. The results of this questionnaire will be used to evaluate instructional materials and methods, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and
Completely Erase Incorrect Answers.

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here

SATISFACTORY | SOME IMPROVEMENT NEEDED | MAJOR IMPROVEMENT NEEDED | NOT APPROPRIATE

A. HAS A COURSE OF STUDY BEEN PREPARED FOR EACH OF THE PROGRAM'S COURSES?
1. An outline description of course's content is clearly written and related to instructional objectives.
2. Suggested teaching strategies are designed to achieve instructional objectives.
3. Suggested student learning experiences relating to instructional objectives have been built into each course.
4. Materials, tools, equipment, and supplies necessary to complete each objective are identified.
5. Tentative schedule for implementing course of study has been prepared.

B. WHAT IS THE RELATIONSHIP BETWEEN THE PROGRAM'S COURSES?
1. Courses are related to one another and build on skills students learned in previous course.
2. Completion of any one course provides student with skills required for job entry-level employment.

C. ARE INSTRUCTIONAL MATERIALS FREE OF RACIAL, SEX-STEREOTYPING, AND SEX-DISCRIMINATING BIASES?
1. Instructional materials exhibiting a high degree of racial or sex biases have been identified and removed from curriculum.
2. Instructional materials exhibiting a modest or low degree of racial or sex biases have been identified and steps taken to insure student awareness of such biases.
3. New instructional materials developed by instructors or purchased from commercial publishers are reviewed for sex biases before they are used in the program.

D. ARE INSTRUCTIONAL MATERIALS UP-TO-DATE AND AT APPROPRIATE STUDENT LEVELS?
1. Instructional materials are reviewed periodically to insure consistency with current occupational practices.
2. Instructional materials are at the appropriate educational level for students in the program.
3. Instructional materials cover content that is related to instructional objectives.

E. WHICH OF THE FOLLOWING TYPES OF INSTRUCTIONAL MATERIALS ARE USED IN THE PROGRAM?

Percent of Time Used

1. Text books
2. Technical manuals
3. Laboratory work-assignment sheets
4. Film strips
5. Transparencies
6. Films
7. Commercial training equipment

PERCENT OF TIME USED: 0-20 | 21-50 | 51-75 | 76-100

F. WHICH OF THE FOLLOWING INSTRUCTIONAL METHODS ARE USED IN THE PROGRAM?

Percent of Time Used

1. Lecture
2. Lecture-demonstration
3. Workbook assignments
4. Laboratory-shop assignments
5. Independent study
6. Reading assignments
7. Term papers
8. Audiovisual presentations
9. Group projects
10. Individual projects

PERCENT OF TIME USED: 0-20 | 21-50 | 51-75 | 76-100

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION.
- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY
- Local Personnel
- Visiting Team Person

LEA:
SCHOOL:
PROGRAM:
3

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MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

4

STUDENT ASSESSMENT SYSTEM IN VOCATIONAL EDUCATION PROGRAMS

The purpose of this questionnaire is to gather information about the different types and quality of student assessment systems used in vocational education programs. This information will enable vocational educators to improve the quality of vocational student assessment. The results of this questionnaire will be used to evaluate a vocational program's student assessment services, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

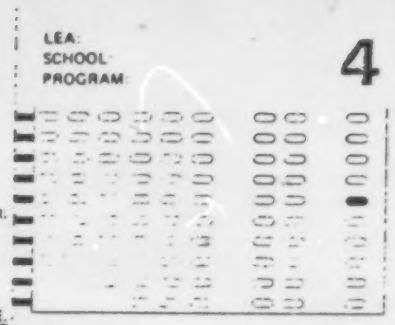
SATISFACTORY: the program meets the specified statement.
SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and
Completely Erase Incorrect Answers.

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here



		SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
A. HAS A STUDENT ASSESSMENT SYSTEM BEEN DEVELOPED AND IMPLEMENTED TO TEST STUDENT ACHIEVEMENT AND/OR PERFORMANCE?	A.				
1. A system has been developed and implemented to test student achievement and/or performance and is based upon attainment of specific occupationally related objectives.	1.				
2. Guidelines have been prepared & distributed to students describing the assessment system (grading procedures, schedules, etc).	2.				
B. WHAT ARE THE PROGRAM'S PRACTICES REGARDING THE USE OF WRITTEN TESTS?	B.				
1. Students are informed about the purposes of the tests prior to administration.	1.				
2. Written directions for test administration are clear and concise.	2.				
3. Adequate space is provided for test administration.	3.				
4. Test questions are related to specific student objectives or occupational competencies.	4.				
5. A system for grading and recording test scores has been developed and implemented.	5.				
6. Students are informed about how well they performed on tests after tests have been scored.	6.				
7. Procedures for making-up program's written tests are reviewed periodically by staff.	7.				
C. WHAT ARE THE PROGRAM'S PRACTICES REGARDING THE USE OF PERFORMANCE TESTS?	C.				
1. Students are informed about the purpose of the test prior to test administration.	1.				
2. Performance tests are related to instructional objectives or occupational competencies.	2.				
3. Written directions for administering a performance test describe precisely the skills students should demonstrate.	3.				
4. Equipment, tools, materials, etc. that students must use in performing work are listed & given to students prior to test.	4.				
5. Standards for measuring level of performance have been identified and are consistent with instructional objectives.	5.				
6. Students are informed of standards for measuring performance prior to test administration.	6.				
7. Sufficient equipment, tools, materials & supplies are available for conducting performance tests.	7.				
8. Students are informed about how well they performed on tests after tests have been scored.	8.				
9. Purpose and adequacy of program's performance tests are reviewed periodically by staff.	9.				

		YES	NO
D. WHICH OF THE FOLLOWING BEST DESCRIBE THE PURPOSE(S) OF THE PROGRAM'S STUDENT ASSESSMENT SYSTEM? (MARK YES OR NO)	D.		
1. Providing information to students about strengths and weaknesses of student's performance	1.		
2. Providing information to instructor for determining student grades	2.		
3. Providing information to instructor about student competencies when they enter program			
4. Providing information to instructor for program improvement purposes			
5. Providing information to instructor about student's competencies when they leave the program			
6. Providing information to instructor about student strengths and weaknesses	6.		
7. Providing information to parents about student progress	7.		

		YES	NO
E. HAVE PERFORMANCE STANDARDS FOR SPECIFIC OBJECTIVES OR COMPETENCIES BEEN ESTABLISHED? (MARK YES OR NO)	E.		
1. Established with assistance from local technical or craft committee members or other employer representatives.	1.		
2. Established based upon previous experience with other classes.	2.		
3. Based on established business or industrial requirements for entry into job.	3.		
4. Based on instructor's employment experience.	4.		
5. Vocational-Technical Education Consortium of States.	5.		

		TEACHER DEVELOPED	COMMERCIALLY DEVELOPED	TEACHER DEVELOPED YES	TEACHER DEVELOPED NO	COMMERCIALLY DEVELOPED YES	COMMERCIALLY DEVELOPED NO
F. WHICH OF THE FOLLOWING TYPES OF STUDENT ASSESSMENT MEASURES DOES THE PROGRAM USE? (MARK YES OR NO)	F.						
1. Criterion-reference written tests (achievement test built upon specific concepts)	1.						
2. Performance tests	2.						
3. Standardized occupational competency tests	3.						
4. Norm referenced tests (achievement test built to measure broad and general concepts'	4.						
5. Observation instruments (used to measure involvement or process behaviors)	5.						
6. Questionnaires (used to measure opinions, attitudes and judgments)	6.						

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

5

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MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

5

VOCATIONAL PROGRAM TECHNICAL/CRAFT COMMITTEE

The purpose of this questionnaire is to gather information about the functioning of a vocational program's craft committee. The results will be used to evaluate the effectiveness of the craft committee.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY. NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

A. DOES THE TECHNICAL/CRAFT COMMITTEE FUNCTION IN AN EFFECTIVE MANNER?

1. Guidelines, policies, and procedures have been established for the operation and maintenance of the committee.
2. Committee is composed of persons representing occupational areas related to vocational program.
3. Committee meets on a regularly scheduled basis.
4. Minutes of each meeting are prepared and distributed to committee members, vocational administrators, and instructors.
5. Committee is composed of persons representing minority groups which the program services.
6. Committee reports include recommendations for program improvement.
7. Committee recommendations are reviewed by institution's administration and appropriate action taken.

B. IN WHICH OF THE FOLLOWING ACTIVITIES IS THE LOCAL COMMITTEE INVOLVED? (MARK YES OR NO)

1. Assisting in identifying employment opportunities for all students.
2. Assisting in arranging field visits, identifying guest speakers, and other occupational related activities.
3. Recommending new equipment to be purchased for the program.
4. Reviewing program goals and objectives for relevancy to job skills.
5. Assisting program staff in conducting labor market needs assessment.
6. Assisting in locating cooperative education work sites.
7. Evaluating quality of vocational program on an annual basis.
8. Assisting in establishing entry-level job requirements.

LEA:
SCHOOL:
PROGRAM:

5

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here

	A.	SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
1.		3	2	1	0
2.		3	2	1	0
3.		3	2	1	0
4.		3	2	1	0
5.		3	2	1	0
6.		3	2	1	0
7.		3	2	1	0

	B.	YES	NO
1.		1	0
2.		1	0
3.		1	0
4.		1	0
5.		1	0
6.		1	0
7.		1	0
8.		1	0

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

61

VTE 218 47 8/78

LEA:
SCHOOL:
PROGRAM:

6

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

VOCATIONAL EDUCATION PROGRAMS PHILOSOPHY AND POLICIES

The purpose of this questionnaire is to gather information about the development and implementation of a vocational education program's philosophy and policies. This information will enable evaluators to review each of the program elements in relation to specific program policies.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY. NO INK.
DARKEN Response Area Completely, and
Completely Erase Incorrect Answers.

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

RECORD YOUR RESPONSE TWICE:
a) Please Mark Here and
b) Record Your Number Response Here

A. HAS AN INSTITUTIONAL (SCHOOL) VOCATIONAL PHILOSOPHY BEEN DEVELOPED?

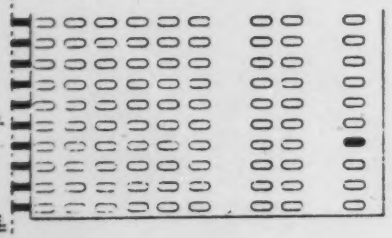
1. A document describing the institution's philosophy has been written.
2. Program goals are consistent with institution's philosophy.
3. Institutional philosophy include policy statements for eliminating biases from vocational program.
4. Institution's program goals are consistent with State's philosophy.

B. FOR EACH OF THE PROGRAM ELEMENTS LISTED BELOW, INDICATE WHETHER A POLICY STATEMENT HAS BEEN DEVELOPED (WRITTEN).

1. Program goals and objectives
2. Program planning and management
3. Instructional materials and methods
4. Instructional staff qualifications
5. Program equipment, tools, materials, and supplies
6. Guidance services
7. Counseling services
8. Placement services
9. Local technical advisory or craft committee
10. Employer participation in cooperative education programs
11. Community relations and community resources
12. Student vocational organization
13. Student recruitment, selection, and admission procedures
14. Student assessment systems
15. Student and employer follow-up procedures
16. Elimination of sex-stereotyping, sex discrimination, and racial discrimination
17. Program evaluation

LEA:
SCHOOL:
PROGRAM:

6



A. (SATISFACTORY / SOME IMPROVEMENT NEEDED / MAJOR IMPROVEMENT NEEDED / NOT APPROPRIATE)

1. 3 2 1 0
2. 3 2 1 0
3. 3 2 1 0
4. 3 2 1 0

B.

	YES	NO
1.	0	1
2.	0	2
3.	0	3
4.	0	4
5.	0	5
6.	0	6
7.	0	7
8.	0	8
9.	0	9
10.	0	10
11.	0	11
12.	0	12
13.	0	13
14.	0	14
15.	0	15
16.	0	16
17.	0	17

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- 0 Student
- 1 Teacher
- 2 Principal
- 3 Vice Principal
- 4 Guidance Counselor
- 5 Central Office
- 6 Craft Committee
- 7 Other

THIS FORM IS BEING COMPLETED BY

- 0 Local Personnel
- 1 Visiting Team Person

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VTE 219 47 8/78

LEA:
SCHOOL:
PROGRAM:

7

LEA:
SCHOOL:
PROGRAM:

7

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

COMMUNITY RELATIONS AND RESOURCES

The purpose of this questionnaire is to gather information about the vocational program's relations with the community and the use of community resources. This information will help vocational educators utilize community resources more fully. The results of this questionnaire will be used for evaluating programs, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

		SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
A. HAS A WRITTEN PLAN BEEN DEVELOPED FOR ESTABLISHING AND MAINTAINING POSITIVE COMMUNITY RELATIONS AND EFFECTIVELY UTILIZING COMMUNITY RESOURCES?	A.				
1. Goals and objectives have been established for the effective use of community resources.	1.				
2. Activities have been identified for achieving goals and objectives.	2.				
3. Resources have been identified for accomplishing activities.	3.				
4. Procedures have been developed for assessing the extent to which goals and objectives have been achieved	4.				
5. The planned use of community resources is consistent with objectives of the vocational program.	5.				
B. HAVE ACTIVITIES FOR ESTABLISHING AND MAINTAINING POSITIVE COMMUNITY RELATIONS BEEN IMPLEMENTED?	B.				
1. Pamphlets, brochures, and other descriptive materials have been developed that clearly describe the goals, objectives, and admission procedures of the vocational program which are non-discriminatory as to sex and race.	1.				
2. Descriptive materials depicting males and females in traditional and non-traditional work roles have been prepared.	2.				
3. Descriptive materials previously identified have been disseminated within the school.	3.				
4. Descriptive materials have been disseminated to the out-of-school community (parents, prospective students, employers).	4.				
5. Program staff make public presentations to the in-school and out-of-school community about vocational programs.	5.				
6. Students make public presentations to the in-school and out-of-school community about vocational programs.	6.				
C. HAVE ACTIVITIES FOR UTILIZING COMMUNITY RESOURCES EFFECTIVELY BEEN IMPLEMENTED?	C.				
1. A survey of local business, industry, and other public and private community representatives is conducted annually to identify potential community resources for the program.	1.				
2. A record-keeping system has been developed that describes characteristics of community resources available to the program.	2.				
3. Evaluative materials have been prepared and used by students and staff for evaluating the effectiveness of community resources.	3.				
4. Community resources have been identified for females and males to explore non-traditional occupations.	4.				

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

VTE 219 47 8/78

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

8

LEA:
SCHOOL:
PROGRAM:

8

GUIDANCE, COUNSELING, AND PLACEMENT SERVICES

The purpose of this questionnaire is to gather information about the quality of guidance, counseling, and placement services that are provided to vocational education students. Such information will enable vocational educators to improve their vocational education programs. The results of this questionnaire will be used to evaluate guidance, counseling, and placement services, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY. NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here

LAST _____ FIRST _____ _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

		SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
A. HAS AN ORGANIZED SYSTEM OF VOCATIONAL GUIDANCE, COUNSELING AND PLACEMENT SERVICES BEEN DEVELOPED AND IMPLEMENTED?	A.				
1. Goals and objectives for guidance, counseling and placement services have been prepared in clear and measurable terms.	1.				
2. Roles and responsibilities for guidance, counseling and placement staff have been prepared and disseminated.	2.				
3. Students, parents, instructors and administrators are made aware of these services through orientation meetings.	3.				
4. Materials describing these services are disseminated throughout the school year to students, parents, instructors, etc.	4.				
5. A schedule has been prepared for guidance, counseling and placement activities (e.g. guest speaker, career days).	5.				
6. Employment placement is an integral part of guidance and counseling services.	6.				
7. Academic, personal and employment counseling are provided to all students.	7.				
8. Guidance, counseling and placement services are evaluated on an annual basis.	8.				
9. A cummulative record is maintained for each student and contains results of vocationally related tests.	9.				
10. Results of testing programs are reviewed with each student.	10.				
11. Guidance, counseling and placement policies and materials have been reviewed for biases.	11.				
B. DOES ADMINISTRATION SUPPORT GUIDANCE, COUNSELING AND PLACEMENT SERVICES WITH ADEQUATE RESOURCES, INCLUDING:	B.				
1. Funding	1.				
2. Facilities, supplies, materials and equipment	2.				
3. Clerical support staff	3.				
4. Space for group and individual counseling sessions	4.				
5. Professional staff	5.				
C. HAS A RECRUITMENT AND ORIENTATION PROGRAM BEEN DEVELOPED AND IMPLEMENTED?	C.				
1. Recruitment and orientation programs are provided to all potential students in a non-discriminating manner.	1.				
2. Students are encouraged to visit vocational programs.	2.				
3. Pamphlets, brochures and other program descriptive materials have been disseminated to potential students.	3.				
4. Potential students are informed about vocational programs individually or in groups.	4.				
5. Recruitment materials emphasize non-traditional occupations for both sexes.	5.				
6. Students not admitted to vocational program of their choice are informed of the reason.	6.				

		YES	NO
D. COUNSELING SERVICES ARE OFFERED TO STUDENTS AT WHICH OF THE FOLLOWING TIMES? (MARK ALL THAT APPLY)	D.		
1. Before entrance into the vocational program	1.		
2. During participation in program at periodic intervals	2.		
3. Upon student demand	3.		
4. Immediately before completing program	4.		
5. After student has left program	5.		

		MARK ONE
E. WHICH ONE OF THE FOLLOWING PERSONS IS PRIMARILY RESPONSIBLE FOR JOB PLACEMENT? (MARK ONE)	E.	
1. Vocational instructor	1.	
2. Placement officer	2.	
3. General counselor	3.	
4. Vocational counselor	4.	
5. Work study coordinator	5.	

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

F. Mark the number of counselors General, Vocational and Vocational Placement Officers employed in the school.
IF MORE THAN FOUR, say there are 5, Mark 4 and 2.

GENERAL COUNSELORS	VOCATIONAL COUNSELORS	PLACEMENT OFFICERS

G. Mark the number of male and female graduate students placed in jobs by the counseling and/or placement office.
Record the number placed in jobs last year. To complete this item, mark the numbers which equals the total for each sex. Example: If 45 females were placed you would mark 32, 8, 4 and 1.

G. NUMBER OF STUDENTS PLACED								
FEMALE	0	1	2	4	8	16	32	64
MALE	0	1	2	4	8	16	32	64

Females Placed _____
Males Placed _____

VTE 219 47 8/78

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM: **9**

LEA:
SCHOOL:
PROGRAM: **9**

VOCATIONAL EDUCATION PROGRAM PLANNING AND MANAGEMENT

The purpose of this questionnaire is to gather information about the quality of a vocational education program's local labor market needs-assessment planning and management system. Such information will enable vocational educators to offer programs in areas with high labor market needs and also will enable more effective planning and management of vocational programs. The results of this questionnaire will be used to evaluate vocational education programs, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here
and
b) Record Your Number Response Here

		SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
A. HAS A SYSTEM BEEN DEVELOPED AND IMPLEMENTED FOR ASSESSING THE LOCAL LABOR-MARKET NEEDS OF EMPLOYERS?	A.				
1. Assessment of labor-market needs of employers in related vocational program area was conducted within the last two years.	1.	3	2	1	0
2. Assessment data includes labor-market needs in related occupations for which students are preparing.	2.	3	2	1	0
3. Written procedures describing the manner in which the labor-market needs assessment is conducted are available.	3.	3	2	1	0
B. TO WHAT EXTENT ARE LABOR-MARKET NEEDS-ASSESSMENT DATA USED FOR PROGRAM PLANNING?	B.				
1. Needs-assessment data are used to make decisions about expanding, limiting, or terminating vocational program.	1.	3	2	1	0
2. Needs-assessment data are used to identify new and emerging occupations related to vocational program.	2.	3	2	1	0
3. Needs-assessment data are used to identify potential employers in the vocational program area.	3.	3	2	1	0
C. TO WHAT EXTENT ARE LABOR-MARKET NEEDS-ASSESSMENT DATA RELATED TO INSTRUCTION AND CURRICULUM?	C.				
1. Instructional objectives are related to preparation of students for employment in occupation(s) of high labor-market needs.	1.	3	2	1	0
2. Students are informed annually about labor-market needs in an occupation(s) for which they are preparing.	2.	3	2	1	0
3. Guidance & placement staff use needs-assessment data to identify employers with greatest labor market needs.	3.	3	2	1	0
D. FIVE YEAR AND ANNUAL PLANS HAVE BEEN PREPARED THAT INCLUDES EACH OF THE FOLLOWING ITEMS:	D.				
1. Five year plan has been prepared that demonstrates relationship between goals and program activities.	1.	3	2	1	0
2. Annual plan has been prepared that demonstrates application of evaluation results & other information in modifying plans.	2.	3	2	1	0
3. Vocational program is in area of vocational needs of students.	3.	3	2	1	0
4. Five year and annual plans have been developed in cooperation with proprietary, private, and parochial schools.	4.	3	2	1	0
5. Five year and annual plans have been approved by local advisory council for vocational education.	5.	3	2	1	0
6. Program has been coordinated with area prime sponsor of CETA programs.	6.	3	2	1	0
7. Program is operating in compliance with intent of legislation, rules, regulations and State policy.	7.	3	2	1	0
8. Both plans include budgets that demonstrate appropriate use of funds within requirements of federal legislation.	8.	3	2	1	0
E. TO WHAT EXTENT IS PROGRAM OPERATION CONSISTENT WITH PROGRAM'S PROPOSAL IN EACH OF THE FOLLOWING AREAS?	E.				
1. Number of students served.	1.	3	2	1	0
2. Number of instructors employed.	2.	3	2	1	0
3. Program time cycle.	3.	3	2	1	0
4. Number of students placed in occupations or further education.	4.	3	2	1	0
5. Itemized operating expenses.	5.	3	2	1	0
6. Annual program evaluation.	6.	3	2	1	0

F. WHICH OF THE FOLLOWING SOURCES OF INFORMATION ARE USED FOR ESTIMATING LABOR MARKET NEEDS? (MARK ALL THAT APPLY)	F.	MARK ALL THAT APPLY
1. Local technical advisory or craft committee members.	1.	1
2. Personal contact with local employers.	2.	1
3. Maryland's State Department of Vocational-Technical Education.	3.	1
4. Telephone survey of selected local employers.	4.	1
5. Mail survey of selected local employers.	5.	1
6. Maryland's State Employment Services Agency.	6.	1
7. State Advisory Council on Vocational Education.	7.	1
8. State Occupational Information Coordinating Committee.	8.	1
9. Women's Bureau.	9.	1
10. U.S. Department of Labor.	10.	1
11. Equal Employment Opportunity Officers.	11.	1

G. DOES THE VOCATIONAL PROGRAM PROVIDE OCCUPATIONAL PREPARATION FOR ENTRY-LEVEL EMPLOYMENT BASED ON CURRENT LABOR MARKET NEEDS? (MARK ONE)	G.	MARK ONE
1. Vocational program is in an area of high labor-market needs.	1.	3
2. Vocational program is in an area of modest labor-market needs.	2.	2
3. Vocational program is in an area of low labor-market needs.	3.	1

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

VTE 219 47 8/78

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

10

LEA:
SCHOOL:
PROGRAM:

10

VOCATIONAL EDUCATION PROGRAM FACILITIES AND EQUIPMENT

The purpose of this questionnaire is to gather information about the quality of a vocational education program's facilities and equipment. This information will help vocational educators improve their programs. The results of this questionnaire will be used to evaluate program facilities and equipment, not individuals.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY. NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here and
b) Record Your Number Response Here

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

		SATISFACTORY	SOME IMPROVEMENT NEEDED	MAJOR IMPROVEMENT NEEDED	NOT APPROPRIATE
A. HOW ADEQUATE ARE THE SAFETY ASPECTS OF THE PROGRAM'S FACILITIES, TOOLS AND EQUIPMENT?	A.				
1. Safety guards, emergency cut-off switches and other safety features are found on all operating equipment.	1.	3	2	1	0
2. Safety glasses, aprons, insulated gloves and other personal-safety items are readily available to staff and students.	2.	3	2	1	0
3. Emergency exits and procedures for emergency exiting are well marked and convenient for all students, including handicapped.	3.	3	2	1	0
4. Fire extinguishers and other safety equipment are well marked, accessible and available for emergency fire control.	4.	3	2	1	0
5. Safety equipment is subject to regular inspection.	5.	3	2	1	0
6. Safe storage for supplies and equipment is provided.	6.	3	2	1	0
7. Inventory list of federally purchased equipment, supplies and materials is current and available.	7.	3	2	1	0
8. Equipment purchased with federal funds is identified and tagged.	8.	3	2	1	0
B. HOW ADEQUATE ARE THE VOCATIONAL FACILITIES FOR ACHIEVING PROGRAM OBJECTIVES?	B.				
1. Vocational facilities have a sufficient number of work stations for all students enrolled.	1.	3	2	1	0
2. Vocational facilities are accessible by students with special needs (handicapped).	2.	3	2	1	0
3. Adequate space is provided for group instruction and independent study.	3.	3	2	1	0
4. Acoustics, ventilation and illumination are adequate for maximum student learning and health.	4.	3	2	1	0
5. Location and arrangement of vocational facilities do not hinder enrollment by both male and female student; locker, lavatory and wash-up facilities are provided for both males and females.	5.	3	2	1	0
C. HOW ADEQUATE ARE THE PROGRAM'S TOOLS, MATERIALS, AND SUPPLIES?	C.				
1. Sufficient space is provided for convenient, secure and safe storage of all tools, portable equipment, supplies and materials.	1.	3	2	1	0
2. Tools and equipment are in good working condition.	2.	3	2	1	0
3. Equipment, tools, materials and supplies are consistent with program objectives.	3.	3	2	1	0
4. Equipment, tools, materials and supplies are similar to those found in occupations for which students are being prepared.	4.	3	2	1	0
D. ARE TOOLS, EQUIPMENT, MATERIALS AND SUPPLIES AVAILABLE IN SUFFICIENT QUANTITY TO INSURE ACCOMPLISHMENT OF PROGRAM OBJECTIVES?	D.				
1. Tools are available in sufficient quantity.	1.	3	2	1	0
2. Equipment is available in sufficient quantity.	2.	3	2	1	0
3. Materials and supplies are available in sufficient quantity.	3.	3	2	1	0

E. WHAT IS THE TOTAL NUMBER OF WORK STATIONS IN THE FACILITY? E.

_____ Number of Work Stations

NUMBER OF WORK STATIONS

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

PLEASE MARK THE ITEM WHICH BEST DESCRIBES YOUR POSITION

- Student
- Teacher
- Principal
- Vice Principal
- Guidance Counselor
- Central Office
- Craft Committee
- Other

THIS FORM IS BEING COMPLETED BY

- Local Personnel
- Visiting Team Person

VTE 219 47 8/79

LEA:
SCHOOL:
PROGRAM:

11

LEA:
SCHOOL:
PROGRAM:

11

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

VOCATIONAL STUDENT ORGANIZATION

The purpose of this questionnaire is to gather information about vocational student organizations that relate to a specific vocational program area. The results will aid in improving the student organization(s) as an integral part of the vocational program. Only complete this questionnaire if a student organization is associated with the vocational program(s).

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

3. SATISFACTORY: the program meets the specified statement.
2. SOME IMPROVEMENT NEEDED: the program meets part of the specified statement.
1. MAJOR IMPROVEMENT NEEDED: the program does not meet the specified statement.
0. NOT APPROPRIATE: the specified statement is not applicable to this program.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

RECORD YOUR RESPONSE TWICE.
a) Please Mark Here
and
b) Record Your Number Response Here

LAST _____ FIRST _____
NAME OF PERSON WHO COMPLETED THIS QUESTIONNAIRE.

A. NAME OF THE VOCATIONAL STUDENT ORGANIZATION AND NUMBER OF STUDENTS PARTICIPATING.

1. Distributive Education Clubs of America.
2. Future Business Leaders of America.
3. Future Farmers of America.
4. Future Homemakers of America.
5. Vocational Industrial Clubs of America.
6. Office Education Association.
7. Health Occupation Students of America.

A. VOCATIONAL STUDENT ORGANIZATION

1. DECA
2. FBLA
3. FFA
4. FHA
5. VICA
6. OEA
7. HOSA

MARK ENROLLMENT IN ORGANIZATION

B. WHAT ARE THE CHARACTERISTICS OF THE VOCATIONAL STUDENT ORGANIZATION?

1. Goals and objectives of student organization have been prepared.
2. Policies and procedures have been developed and implemented for selection and tenure of organization's officers.
3. Descriptions of officers' roles and responsibilities have been prepared.
4. A schedule of the meetings and activities has been prepared.
5. Minutes of the meetings have been prepared.
6. Student organizational activities are related to stated goals and objectives.
7. Membership in student organization is unbiased as to sex, race and creed and is open to all eligible students.

B. | SATISFACTORY | SOME IMPROVEMENT NEEDED | MAJOR IMPROVEMENT NEEDED | NOT APPROPRIATE

IS THIS FORM BEING COMPLETED BY THE COORDINATOR OF THE STUDENT ORGANIZATION?
YES
NO

C. TO WHAT EXTENT IS THE STUDENT ORGANIZATION AN INTEGRAL PART OF THE VOCATIONAL PROGRAM?

1. Representatives of student organization are consulted about development of attendance, grading and disciplinary policies.
2. Representatives of student organization are consulted regarding changes in the vocational program's curriculum.
3. One or more qualified staff members in the relevant vocational program area acts as advisor to the student organization.

C.

THIS FORM IS BEING COMPLETED BY
Local Personnel
Visiting Team Person

D. DOES THE INSTITUTION'S ADMINISTRATION SUPPORT THE STUDENT ORGANIZATION?

1. Adequate facilities, personnel, time and other resources are provided the student organization.
2. Scheduling allows students to participate in organizational activities as an integral part of the program.
3. Administrators and staff are made aware of the organization's goals and objectives.
4. The student organization focuses on co-curricular programs rather than extra curricular activities.

D.

E. THE FOLLOWING IS A LIST OF PURPOSES OF VOCATIONAL STUDENT ORGANIZATIONS. MARK YES OR NO.

1. Recruiting students into vocational education programs.
2. Designing educational exhibits for display at conventions, community centers, etc.
3. Identifying potential employers.
4. Maintaining vocational facilities, equipment, and tools.
5. Hosting guest speakers.
6. Providing tutorial and remedial services to students who need special assistance.
7. Representing opinions of vocational students to administration and instructional staff.
8. Providing assistance to community agencies.
9. Developing students' ability to communicate effectively with peers and adults.
10. Providing students with an opportunity to actively participate in democratic processes.
11. Providing students with an opportunity to develop leadership skills.

E. | YES | NO

VTE 219 47 8/79

MARYLAND STATE DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION PROGRAM EVALUATION QUESTIONNAIRE

LEA:
SCHOOL:
PROGRAM:

12

LEA:
SCHOOL:
PROGRAM:

12

STUDENTS' VIEWS OF THE INSTITUTION'S VOCATIONAL EDUCATION PROGRAM

The purpose of this questionnaire is to learn more about the vocational education program in which you are currently enrolled. Such information will enable your institution to understand and improve the program. The questionnaire is not a test. It will not be used to evaluate individuals. Please do not sign your name or identify yourself in any way.

PLEASE USE A PENCIL ONLY, NO INK.
DARKEN Response Area Completely, and Completely Erase Incorrect Answers.

TO ANSWER THE ITEMS: Please rate frankly your vocational-technical program using the following scale.

4. STRONGLY AGREE: means you completely agree with the statement.
3. AGREE: means you agree with most of the statement.
2. DISAGREE: means you DO NOT agree with most of the statement.
1. STRONGLY DISAGREE: means you DO NOT agree with the statement at all.

NOTE: Some items may require a different response, please mark as appropriate.

PLEASE FIRST COMPLETE ITEMS X, Y and Z which pertain to sex, race and grade then:→ RECORD YOUR RESPONSE TWICE.

a) Please Mark Here and b) Record Your Response Here

		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
A. THE FOLLOWING IS A SERIES OF STATEMENTS THAT DESCRIBE INSTRUCTION. INDICATE HOW STRONGLY YOU AGREE/DISAGREE.	A.				
1. In general, the instruction I have received is related to the occupation for which I am preparing.	1.				
2. There is a good balance between classroom and hands on work.	2.				
3. Assignments are made clear.	3.				
4. Tests and other examinations are related to the occupation for which I am preparing.	4.				
5. I understand what I am expected to learn from the program.	5.				
6. I would like to take another course from this instructor.	6.				
7. Instructional materials are related to the occupation for which I am preparing.	7.				
8. The instructor uses different ways to present the program's content.	8.				
9. The instructor provides students with special help when it is needed.	9.				
10. Students have a say in how the program is operated.	10.				
B. PLEASE INDICATE HOW STRONGLY YOU AGREE/DISAGREE WITH THE FOLLOWING STATEMENTS DESCRIBING PROGRAM'S FACILITIES, TOOLS, ETC.	B.				
1. Safety guards, emergency cut-off switches and other safety devices are found on all operating equipment.	1.				
2. Safety glasses, aprons, insulated gloves and other safety items are provided to all students.	2.				
3. Emergency exits are well marked and convenient for all students.	3.				
4. Fire extinguishers and other safety equipment are well marked, readily accessible for emergency situations	4.				
5. Enough space is provided for group instruction and independent study.	5.				
6. Tools and equipment are in good working condition.	6.				
7. Tools and equipment in the program are like that shown in our program's text books and other instructional materials.	7.				
8. Program facilities are well lighted and ventilated.	8.				
9. Students are provided instruction about the safe use of tools and equipment	9.				
C. HOW WOULD YOU RATE YOUR INSTITUTION'S GUIDANCE, COUNSELING AND PLACEMENT SERVICES IN THESE AREAS?	C.	VERY GOOD	GOOD	FAIR	POOR
1. Selecting vocational programs	1.				
2. Interpreting test scores	2.				
3. Placing students in jobs after graduation	3.				
4. Discussing occupational opportunities	4.				
5. Advising students about occupational choices	5.				
6. Helping students plan careers	6.				
7. Helping students clarify their occupational interest, abilities and values	7.				
8. Selecting academic programs	8.				
9. Placing students in part-time jobs	9.				
10. Advising students about colleges	10.				
11. Helping students adjust to school	11.				
D. DOES YOUR INSTITUTION SPONSOR A VOCATIONAL STUDENT ORGANIZATION IN THE VOCATIONAL PROGRAM YOU ARE CURRENTLY ENR[illegible]?	D.	YES		NO	
E. IF YES, ARE YOU A MEMBER OF THE ORGANIZATION?	E.	YES		NO	
F. IF YOU ARE A MEMBER, HOW WOULD YOU RATE THE VOCATIONAL STUDENT ORGANIZATION IN THESE AREAS?	F.	VERY GOOD	GOOD	FAIR	POOR
1. Helping students learn more about their occupational choice	1.				
2. Working with adults in the community	2.				
3. Learning how to run a meeting	3.				
4. Finding jobs	4.				
5. Providing opportunity to talk to adults	5.				
6. Telling students about vocational education programs	6.				
7. Inviting employers to talk about occupations and job opportunities	7.				
8. Helping students who need special assistance	8.				

X. SEX
FEMALE 0
MALE

Y. RACE
AMER. INDIAN OR NATIVE ALASKAN 0
ASIAN OR PACIFIC ISLANDER
BLACK, NOT OF HISPANIC ORIGIN
HISPANIC
WHITE, NOT OF HISPANIC ORIGIN

Z. GRADE
12th
11th
10th
9th
8th
7th
Ungraded

73

74

68

MARYLAND STATE DEPARTMENT OF EDUCATION

DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

P. O. BOX 8717 BALTO.,– WASH. INTERNATIONAL AIRPORT BALTIMORE, MD. 21240

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EMPLOYER FOLLOW-UP QUESTIONNAIRE

EMPLOYEE NAME: _____

SUPERVISOR NAME: _____

Dear Fellow Employer:

As you attempt to increase production and improve the quality of your products, I too am attempting to improve upon the skills and attitudes of the graduates from our vocational programs. To assist me in this effort, I need you, an employer of our graduates, to tell me how well the graduates are performing on the job.

Your responses to the following questions will be analyzed and used both at the State and local levels to improve programs of vocational-technical education.

I wish you and your company success and hope that together we can help to develop productive citizens in Maryland.

Sincerely,

David W. Hornbeck
State Superintendent of Schools

PLEASE ANSWER EACH APPROPRIATE QUESTION AND RETURN THE COMPLETED QUESTIONNAIRE IN THE PRE-ADDRESSED AND POSTAGE PAID ENVELOPE PROVIDED.

THANK YOU FOR YOUR COOPERATION

— PLEASE INDICATE PRESENT JOB TITLE OF EMPLOYEE: _____

A. COMPARED TO THE TYPICAL ENTERING EMPLOYEE, HOW QUALIFIED WAS THIS STUDENT IN THE FOLLOWING AREAS AT THE TIME OF EMPLOYMENT?

	Exceeded Job Requirements 5	Exceeded Job Requirements in Some Areas 4	Met Minimum Job Requirements 3	Did Not Meet Some Job Requirements 2	Did Not Meet Any Job Requirements 1	
1. Ability to use tools and equipment	☐	☐	☐	☐	☐	26
2. Knowledge of job duties	☐	☐	☐	☐	☐	27
3. Technical job information possessed	☐	☐	☐	☐	☐	28
4. Productivity	☐	☐	☐	☐	☐	29
5. Accuracy and quality of work	☐	☐	☐	☐	☐	30
6. Safe work practices	☐	☐	☐	☐	☐	31

B. COMPARED TO THE TYPICAL ENTERING EMPLOYEE, HOW QUICKLY DID THIS STUDENT LEARN NEW JOB SKILLS?

	Learned Rapidly with Little Instruction 5	Requires Less Than Average Instruction 4	Requires Average Amount of Instruction 3	Acquires New Skills Slowly 2	Unable to Acquire new Job Skills 1	
1. Ability to use tools and equipment	☐	☐	☐	☐	☐	32
2. Knowledge of job duties	☐	☐	☐	☐	☐	33
3. Technical job information possessed	☐	☐	☐	☐	☐	34
4. Productivity	☐	☐	☐	☐	☐	35
5. Accuracy and quality of work	☐	☐	☐	☐	☐	36
6. Safe work practices	☐	☐	☐	☐	☐	37

PLEASE COMPLETE ADDITIONAL QUESTIONS ON REVERSE SIDE.

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CONTINUATION OF EMPLOYER FOLLOW-UP QUESTIONNAIRE

C. COMPARED TO THE TYPICAL ENTERING EMPLOYEE, HOW PREPARED WAS THIS STUDENT FOR NONTECHNICAL JOB SKILLS?

	Exceeded Job Requirements 5	Exceeded Job Requirements in Some Areas 4	Met Maximum Job Requirements 3	Did Not Meet Some Job Requirements 2	Did Not Meet Any Job Requirements 1	
1. Attendance and punctuality	☐	☐	☐	☐	☐	(39)
2. Ability to get along with fellow workers	☐	☐	☐	☐	☐	(40)
3. Ability to get along with supervisors	☐	☐	☐	☐	☐	(41)
4. Ability to complete assignments on time	☐	☐	☐	☐	☐	(42)
5. Ability to complete assignments with minimal supervision	☐	☐	☐	☐	☐	(43)
6. Ability to adapt to new job situations	☐	☐	☐	☐	☐	(44)

D. OVERALL, HOW WELL PREPARED WAS THIS VOCATIONAL EDUCATION STUDENT?

1. Exceptionally well prepared; education closely matched entry-job requirements	☐	(45)
2. Well prepared; education covered most entry-job requirements, but missed some	☐	(46)
3. Poorly prepared; education did not cover most entry job requirements	☐	(47)

E. BASED UPON YOUR EXPERIENCE WITH THIS AND/OR OTHER VOCATIONAL GRADUATES:

	YES	NO	
1. Would you consider employing additional vocational education graduates?	☐	☐	(48)
2. Would you recommend that other employers hire vocational education graduates?	☐	☐	(49)

F. HOW KNOWLEDGEABLE ARE YOU ABOUT THE VOCATIONAL EDUCATION PROGRAM THAT YOUR EMPLOYEE (FORMER VOCATIONAL EDUCATION STUDENT) COMPLETED?

Very Knowledgeable about the Program 5	Know a Great Deal about the Program 4	Somewhat Knowledgeable 3	Limited Knowledge about the Program 2	Know Nothing about the Program 1	
☐	☐	☐	☐	☐	(50)

MARYLAND STATE DEPARTMENT OF EDUCATION
200 WEST BALTIMORE STREET
BALTIMORE, MARYLAND 21201

DAVID W HORNBECK
STATE SUPERINTENDENT

WORKER OPINION SURVEY

Hello. We need your opinions to help us find out what kind of job training works best for what kind of person. Please put a ✓ in front of the answer you choose or, if necessary, write out your answer. Your answers will be completely private and confidential. We just want your honest opinions so we can help other people like yourself.

1. How are you feeling today? ____great ____average ____terrible

2. If you could have any job, what job would it be? _____

3. What is your present job? _____

4. What kind of education and training have you had? Check all that apply to you.

____Grade school ____Apprenticeship program ____Other (Describe)

____High School ____CETA program _____

____Vocational School ____Industrial Training program _____

____College ____Co-op program

5. How satisfied were you with your most recent training program?

____Very Happy ____Happy ____Not Real Happy ____Very Unhappy

6. Would you ever go back to this program for more training?

____Yes, definitely ____Maybe ____Probably not ____No way

7. Look at the six activities below.
Place a "3" next to the ones you enjoy doing, a "2" next to the ones you don't care about, and a "1" next to those you don't like to do.

____Operating Machines ____Helping People

____Doing Science ____Being in Charge

____Creating Art ____Being Organized

8. What does your father do for a living?* _____

9. What does your mother do?* _____

10. How old are you?_____

OVER

*If either parent is deceased or retired, write in former job. If either parent has held several jobs, put down job held longest.

11. I am ____male ____female.

12. I am ____Black ____Spanish ____Asian ____White ____Other.

13. As a child, how much did you like school?

____A lot ____Some ____Not much ____Not at all

14. How often did you get into trouble when you were growing up?

____All the time ____Sometimes ____Not much ____Not at all

15. Do you have any special problems or handicaps? ____Yes ____No

If so, what? _____

16. Is there anything else you would like to say about yourself or your job training that might help us?

_____

_____

_____

_____

_____

17. Your name: _____ Date: _____

Thank you very much for your help.

MARYLAND STATE DEPARTMENT OF EDUCATION
200 WEST BALTIMORE STREET
BALTIMORE, MARYLAND 21201

DAVID W. HORNBECK
STATE SUPERINTENDENT

SUPERVISOR RATING FORM

Dear Supervisor:

The information you give us on this form fill help us determine what kind of person benefits most from what kind of job training program. We greatly appreciate your help in this project.

Supervisor Name: _____ Program Name: _____

Trainee Name: _____

A. Compared to the typical trainee how qualified is this trainee in knowledge of job duties?

Exceeded Job Requirements 5	Exceeded Job Requirements in Some Areas 4	Met Minimum Job Requirements 3	Did Not Meet Some Job Requirements 2	Did Not Meet Any Job Requirements 1
☐	☐	☐	☐	☐

B. Compared to the typical trainee, how quickly does this trainee learn new job skills?

Learned Rapidly with Little Instruction 5	Requires Less Than Average Instruction 4	Requires Average Amount of Instruction 3	Acquires New Skills Slowly 2	Unable to Acquire new Job Skills 1
☐	☐	☐	☐	☐

C. Compared to the typical trainee, how would you rate this trainee's work attitude, attendance, and dependability?

Exceeded Job Requirements 5	Exceeded Job Requirements in Some Areas 4	Met Maximum Job Requirements 3	Did Not Meet Some Job Requirements 2	Did Not Meet Any Job Requirements 1
☐	☐	☐	☐	☐

D. Compared to the typical trainee, how would you rate this trainee's ability to get along with other people?

Exceeded Job Requirements 5	Exceeded Job Requirements in Some Areas 4	Met Maximum Job Requirements 3	Did Not Meet Some Job Requirements 2	Did Not Meet Any Job Requirements 1
☐	☐	☐	☐	☐

E. Overall, how well prepared for work is this trainee?

3 ☐ Exceptionally well prepared; education closely matches entry-job requirements

2 ☐ Well prepared; education covers most entry-job requirements, but misses some

1 ☐ Poorly prepared; education does not cover most entry-job requirements